

OPPORTUNITY THROUGH ONLINE LEARNING

Improving student access, participation and success in higher education

EQUITY FELLOWSHIP FINAL REPORT

DR CATHY STONE

2016 Equity Fellow

NCSEHE & The University of Newcastle

March 2016



NCSEHE
National Centre for Student
Equity in Higher Education



Curtin University



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Acknowledgements

As with any major research study, this would not have been possible without the generous support of many others. Firstly I wish to acknowledge the support of the Australian Government Department of Education and Training, which funded the 2016 Equity Fellows program through the National Centre for Student Equity in Higher Education (NCSEHE) at Curtin University and for which I am extremely grateful. This research would also not have been possible without the support that I have received from both the NCSEHE and the Centre of Excellence for Equity in Higher Education (CEEHE) at the University of Newcastle. I am particularly grateful to the Directors of these two centres, Professor Sue Trinidad (NCSEHE) and Professors Penny-Jane Burke and Geoff Whitty (CEEHE), who have provided me with practical and moral support at every step of the way. I would also like to thank Professor Marcia Devlin for her generosity in being willing to be my 'critical friend' during this research. Both the research, and I personally, benefited greatly from her wisdom and experience. It has also been such a pleasure to travel this journey alongside my two Equity Fellow colleagues for 2016, Associate Professor Erica Southgate and Dr Nadine Zacharias. Although each of our research projects was quite different from the other, I have very much enjoyed and appreciated the support and collegiality that we have shared along the way.

Most important of all however was the willingness of the institutions and the staff within them to give me their time to participate in this research. I give my wholehearted thanks to each and every one of them for sharing their passion, commitment and combined wisdom with me about their practices in online education and with online students. Thank you to the 16 higher education institutions who gave me permission to interview staff within them; thank you to the 151 members of academic and professional staff across these institutions for sharing your knowledge with me; and thank you to the many other staff across these and other universities who have followed the progress of this research and helped me with their continued interest, feedback, discussion and support.

Executive Summary

Online learning has a critical place in widening access and participation in education for a diverse range of students, many of whom are from backgrounds which have been historically underrepresented at university. Students from low socioeconomic backgrounds (low SES), students with disability, regional and remote students, Indigenous students, and students who are first in their families to enter university, are represented particularly strongly in online undergraduate programs. However, both retention and completion rates for online, distance students are considerably lower than amongst those enrolled as on-campus students. The research outlined in this report was made possible by an Equity Fellowship, offered for 2016 through the National Centre for Student Equity in Higher Education with funding from the Australian Government Department of Education and Training (DET). Through qualitative interviews with 151 members of academic and professional staff across 16 higher education institutions – 15 in Australia plus the Open University (OU) United Kingdom (UK) – it sought the combined wisdom of practitioners in online learning to inform the development of *National Guidelines to Improve Student Outcomes in Online Learning*. From analysis of the interview data and other related published research, seven key findings emerged.

Key Findings

1. A strategic whole-of-institution approach is required; one that recognises online education as ‘core business’. This approach needs to include an institution-wide understanding of the nature and diversity of the online student cohort as well as the development and implementation of quality standards for online education, which undergo continuous quality improvement.
2. Early intervention with students to connect, prepare and engage is essential; particularly in terms of providing realistic expectations and encouraging and facilitating academic preparation.
3. ‘Teacher-presence’ plays a vital role in building a sense of belonging to the learning community and in improving student retention; however the time-consuming nature of developing and maintaining a strong sense of ‘teacher-presence’ is not always recognised in existing workload models.
4. Content, curriculum and delivery need to be designed specifically for online learning; they need to be engaging, interactive, supportive and designed to strengthen interaction amongst students.
5. Regular and structured contact between the institution and the student is important in providing connection and direction along the student journey. This includes proactively reaching out to students at particular points along their journey, and is best achieved through the development of an institutional framework of interventions.
6. Learning analytics play an important role in informing appropriate and effective student interventions, including through predictive modelling and personalising the learning experience.
7. Collaboration across the institution is required to integrate and embed support; delivering it to students at point of need. When academic and professional staff cross traditional boundaries to work more closely together, a more holistic student experience can be delivered, including embedding support within curriculum.

These seven findings have informed the development of a set of 10 *National Guidelines for Improving Student Outcomes in Online Learning*, as outlined below. These are designed to inform institutions about ways to improve student outcomes primarily in undergraduate online education, where there tends to be a considerable diversity of the student cohort; this includes students from backgrounds historically underrepresented at university, as well as those with little prior experience of academic study and/or online study. However, the *Guidelines* are likely to be at least in part transferable to other online post-secondary education settings particularly where there is a similar diversity of student cohort.

National Guidelines for Improving Student Outcomes in Online Learning

Listed below are 10 *National Guidelines for Improving Student Outcomes in Online Learning*, particularly in terms of retention and course completion rates. The *Guidelines* have been developed from the combined wisdom of 151 education practitioners working in online education at 16 different higher education institutions, 15 in Australia as well as the Open University UK. Other literature and research into online education and student experience has also helped to inform the *Guidelines*.

Included are practical examples for institutions of how each guideline can be translated into action. These examples are intended to provide a snapshot of what implementation of the *Guidelines* could look like. At times they represent actual examples of practice in one or more of the institutions which participated in the research, while at other times they are composites of examples from institutions and/or literature.

Examples of resources derived from the interview data and related publications are included beneath each guideline to provide more ideas from which to further explore and investigate possibilities for implementation.

1. Know who the students are

Only by having comprehensive knowledge and understanding of the diversity of the online student cohort within an institution can the students' needs be met in the most appropriate and effective ways. The external, online cohort is generally quite different demographically from the on-campus cohort, yet many universities do not routinely analyse or distribute data that is specific to this cohort. Gaining an accurate institutional understanding of who these students are, means that decisions about and interactions with these students can be better informed. This understanding assists the development of appropriate support, teaching and communication strategies, including flexibility of approach to reduce barriers wherever possible.

TRANSLATING INTO ACTION:

An institution routinely collects data specific to the online student cohort, which is available to staff as required.

This includes:

- de-identified demographic information about specific online student cohorts and the online cohort as a whole, including age, gender, equity-status and other demographics collected
- any other available data such as student satisfaction reports.

Student information:

- is readily accessible via the learning platform dashboard and staff intranet
- is presented in ways that are easy to understand (e.g. pie charts)
- can be further interrogated for more detailed information.

Data and analytics staff are:

- available for further advice
- allocated to work with specific areas of the university, such as faculties, schools, divisions and services.

Teamwork and collaboration is central to:

- planning inclusive teaching, interventions and other strategies for online students
- developing a learning analytics strategy (see Guideline 9) to gain a deeper understanding of the individual needs of the students.

More ideas:

- Bart Rienties et al. (2016)
Scholarly insight 2016: a data wrangler perspective. Open University UK
<https://core.ac.uk/download/pdf/77067424.pdf>
- Kent, M. (2015). *Access and Barriers to Online Education for People with Disabilities*. Retrieved from <https://www.ncsehe.edu.au/wp-content/uploads/2016/05/Access-and-Barriers-to-Online-Education-for-People-with-Disabilities.pdf>

2. Develop, implement and regularly review institution-wide quality standards for delivery of online education

Quality online education needs to be viewed as central to the institution's core business. Quality standards for online teaching, learning design and student support need to be developed and clearly articulated at a senior institutional level; these standards need to include staff development and training, to ensure consistency of quality across all areas, as well as being subject to regular review via a continuous quality improvement framework, to ensure that they are updated and improved over time.

TRANSLATING INTO ACTION:

An institution-wide, senior-level approach is taken to the development of these standards, which includes:

- close consultation with experts and relevant stakeholders within the institution
- the use of other research evidence
- appointment of strategy leaders or 'champions' at executive, faculty, school and division levels of the institution, to take responsibility for and oversee the development, dissemination, implementation and continuous quality improvement of the standards
- standards are embedded within the institutional strategic plan.

More ideas:

- *Standards for Online Education* (Parsell, 2014) <https://www.onlinestandards.net/>
- *Quality and Standards Fact Sheets* (The Open University UK, 2017) <http://www.open.ac.uk/about/main/management/policies-and-statements/quality-and-standards-fact-sheets>

3. Intervene early to address student expectations, build skills and engagement

Early contact and interventions with students, both pre- and post-enrolment enable an institution to: explore student expectations; provide a realistic picture of online study; facilitate appropriate academic preparation; improve early engagement; and build a sense of belonging to a learning community.

TRANSLATING INTO ACTION:

An institution informs and advises prospective students through clear information on its website, including:

- contact information for those wishing to speak with a prospective student advisor
- quizzes and games to help students understand what to expect of online learning
- 'readiness' questions to encourage adequate academic preparation
- information on the most appropriate academic preparation and how to enrol.

Prospective student advisors are well-trained and knowledgeable about the demands and realities of online learning, including support available and how this can be accessed.

Free, online academic preparation is available and recommended via prospective student advisors and through the website, particularly to students new to university or to online study.

The institution makes personal contact with new online students, via a range of media such as telephone, email and messaging to welcome and encourage participation in orientation activities and to refer to help or support as required.

Different approaches and touch points are utilised, such as:

- connecting new online students with those more experienced through peer mentoring programs
- linking online students with a student advisor as their personal contact
- orientation activities, online and face-to-face, offered at different times in different ways
- outreach orientation activities delivered off-campus at locations where distance students and their families are likely to be able to attend.

More ideas:

- Charles Sturt University's Outreach Team
<https://www.csu.edu.au/office-for-students/our-teams/engagement/outreach-team>
- Open-entry, online academic skills support
<http://www.newcastle.edu.au/future-students/uonprep-bridging-courses/academic-survival-skills> (Academic Survival Skills, UON)
<https://www.open.edu.au/courses/arts/open-universities-australia-start-for-success--prep02-2017> (Start for Success, OUA)
- OUA PREP Units <https://www.open.edu.au/courses/preparatory/preparatory-units>
- Minhas-Taneja, V. (2017). Interactive online student transition to university. *Journal of the Australian and New Zealand Student Services Association*, 49(2017).

4. Explicitly value and support the vital role of 'teacher-presence'

Online teachers are absolutely crucial in building teacher-student and student-student relationships. A strong teacher-presence provides online students with a sense of belonging, helping them to feel connected to a community of learning and increasing their likelihood of persisting.

TRANSLATING INTO ACTION:

Within the institution's quality standards (as discussed in Guideline 2), the role of teacher-presence is explicitly recognised and valued. It is also included in institutional resource planning for online education (as discussed in Guideline 10). Online teachers are trained, supported and resourced to create an obvious, supportive, encouraging and professional presence within their online classroom. Sufficient teaching time and appropriate technology is allocated to enable them to provide an interactive, co-created learning experience that eases the isolation of online study and helps students feel connected with the teacher, their fellow students and with the class as a whole.

Examples include:

- welcoming students through personal introductions
- being responsive on discussion boards
- providing timely and detailed feedback
- encouraging deep learning through inclusive and relevant learning activities and assessments
- generating peer interaction over learning tasks
- making appropriate use of learning tools

- assisting with problems
- referring to the correct support.

More ideas:

- *Let students know you're there: Designing online for maximising teacher presence:* Higher Education Faculties and the Office of Learning and Teaching. (Charles Darwin University, 2015) <https://cdu.edu.au/olt/ltresources/downloads/Teacher%20Presence%20PresentationMay2015%20PDF.pdf>
- Signor, L., & Moore, C. (2014). Open Access in Higher Education – Strategies for Engaging Diverse Student Cohorts. *Open Praxis*, 6(3), 305-313.

5. Design for online

Education delivery needs to be designed for online first and foremost. In addition to the growing numbers of fully online students, blended learning for on-campus students is now the norm. Online technology provides multiple ways to access learning and undertake tasks, creating an inclusive learning space for all students.

TRANSLATING INTO ACTION:

An institution adheres to quality standards for online learning design, ensuring inclusivity and accessibility for all students.

There is a consistent and intuitive structure to the learning platform across different faculties, schools and disciplines.

Content is designed to encourage online engagement and interactivity, such as:

- purpose-made short videos with captions
- tasks that encourage communication and collaboration
- use of online tools to provide synchronous and asynchronous activities
- information presented in multiple ways
- the ability for students to move at their own pace
- assessments designed using a mixture of approaches, relevant and relatable to the learning content.

The cultural mix of the student cohort is considered in the design of content, tasks, assessments and mode of delivery, to ensure relevancy and inclusiveness, as are the needs of students with disability, poor internet access and those who may be incarcerated.

A teamwork approach to design sees learning designers and academics working collaboratively to ensure compatibility and accessibility of curriculum, content and delivery.

Continuous improvement is emphasised, with quality reviews regularly conducted across all courses.

More ideas:

- *Online Learning Insights:* <https://onlinelearninginsights.wordpress.com/resources-for-course-designers/>
- Canty, A. J., Goldberg, L. R., Ziebell, J. M., & Ceperkovic, H. (2015). *Meeting the Challenge of designing and delivering an entry level unit of study to engage and inspire learners in online neuroscience education in a Bachelor of Dementia Care.* Paper presented at the ICERI Proceedings, 18-20 November, Seville, Spain. <http://ecite.utas.edu.au/106511>

6. Engage and support through content and delivery

'Interactive', 'connected', 'inclusive' and 'relevant' are all essential criteria for online learning content and teaching strategies, using a range of appropriate technologies, both synchronous and asynchronous, that are specific to online delivery. The flexible nature of online delivery and the time-pressures experienced by high numbers of online students means that asynchronous delivery and interactivity is particularly important in ensuring that all students can participate.

TRANSLATING INTO ACTION:

The institution's quality standards for teaching and delivery of online education (see Guideline 2) specifically include the importance of delivering engaging and supportive curriculum and content. Teachers and curriculum developers receive ongoing and regularly updated training and staff development. Sessional staff receive paid training time to attend. Teaching staff are kept up-to-date with practical resources and guides that are incorporated in training.

Students are engaged and supported through:

- a variety of engaging and relevant content, activities and assessments
- a mixture of approaches and different technologies
- timely, constructive and specific feedback
- opportunity and encouragement to communicate and collaborate through synchronous and asynchronous discussion forums and collaborative tasks
- encouragement of informal peer support opportunities (e.g. social media).

More ideas:

- *6 principles of online teaching* (Charles Darwin University, 2017)
<https://cdu.edu.au/olt/teaching/6keyprinciples.html>
- Devlin, M., & McKay, J. (2016). Teaching students using technology: Facilitating success for students from low socioeconomic status backgrounds in Australian universities. *Australasian Journal of Educational Technology*, 32(1), 92-106.
- Verenikina, I., Jones, P. T., & Delahunty, J. (2017). *The Guide to Fostering Asynchronous Online Discussion in Higher Education*. www.fold.org.au/docs/TheGuide_Final.pdf

7. Build collaboration across campus to offer holistic, integrated and embedded student support

Strong collaboration is required across the academic and professional areas of universities to provide holistic and integrated support to online students. Through this collaboration, support is embedded within the curriculum as much as possible, hence delivering it where and when it is most needed.

TRANSLATING INTO ACTION:

Academic and professional staff collaborate to embed support into the curriculum at point of need, including academic skills and technology support.

Student advisors, IT staff, learning skills staff and library staff are attached to schools and discipline areas, creating teams of academic and professional staff working together within discipline or curriculum areas to provide teaching and support that is linked, relevant and provided at the point of need.

This includes:

- opportunities to practise academic skills embedded within beginning units/modules
- early assessment tasks designed to assist students develop academic literacy skills and

- understand academic expectations
- additional optional online workshops and resources made available and encouraged
- support services easily accessed remotely through a variety of technologies including telephone, email, messaging, live chat, synchronous and asynchronous audio and video
- academic staff knowledgeable about support services and referring students appropriately
- support services are easily locatable via the learning platform; also embedded in course content at relevant points in curriculum
- extended/after-hours' support available to students at times they are more likely to be studying.

More ideas:

- Slade, S., & Prinsloo, P. (2015). *Stemming the flow: improving retention for distance learning students*. Paper presented at the EDEN 2015 Annual Conference. <http://oro.open.ac.uk/44537/>
- *Helping online students succeed* (Stone, 2013) <https://www.slideshare.net/informastudenthealth/catherine-stone>

8. Contact and communicate throughout the student journey

Across the wider institution, the establishment of regular contact points when the institution reaches out to students to provide information, offer support and increase engagement have a demonstrated impact on retention and academic success of online students.

TRANSLATING INTO ACTION:

An institution develops an online student intervention strategy, informed by learning analytics (see Guideline 9) and implemented collaboratively between academic, support and data analysis staff.

A comprehensive institutional framework of interventions is developed, which includes:

- personalised messages, through synchronous and asynchronous technologies, scheduled at particular times and targeted towards particular students or cohorts
- students are regularly and clearly advised about crucial dates and what these mean, including the last date for withdrawal from study before fees are due (census date)
- each student receives only those messages that are relevant for them
- messages are personalised based on a student's activity and behaviour, and tailored to their needs in real time.

Both academic and professional staff are involved in the student intervention strategy ensuring that students are contacted at the most relevant time by the most relevant member of staff. This approach, combined with the personalisation of messages made possible by information from learning analytics, tells the student that the university knows who they are, is interested in them as an individual (see Guideline 1) and is actively seeking to provide them with relevant and timely support.

More ideas:

- MILLS Framework Open University UK (Slade & Prinsloo, 2015)
- Nelson, K., & Creagh, T. (2012). *Case Study 7: University of New England (UNE) Early Alert Program* http://safeguardingstudentlearning.net/wpcontent/uploads/2012/04/LTU_Good-practice-guide_eBook_CaseStudy7_20130320.pdf

9. Use learning analytics to target and personalise student interventions

Data from the institution's systems provides information on online activity of students, which can be constructively harnessed to inform the development, personalisation and appropriate targeting of interventions to help students persist and succeed with their studies.

TRANSLATING INTO ACTION:

An institution uses data from its internal online systems to inform interventions based on student activity and behaviour.

From this data, the institution:

- builds a predictive model to target interventions towards those most likely to need them
- personalises the interventions, including tailoring content and learning activities more specifically for individual students based on their learning engagement and achievements
- takes a collaborative approach towards the development of a learning analytics strategy
- consults widely with academic and support staff in deciding what to ask of the data and how to make the best use of the answers
- makes available information, advice and support to staff working with students across all areas of the university to engage and involve them with the process.

More ideas:

- *Horizon Report*: (Johnson et al., 2016)
<http://cdn.nmc.org/media/2016-nmc-horizon-report-he-EN.pdf>
- *JISC Report*: (Sclater et al., 2016)
<https://www.jisc.ac.uk/sites/default/files/learning-analytics-in-he-v3.pdf>

10. Invest in online education to ensure access and opportunity

In order to successfully implement the strategies discussed in each of the points above, the delivery of online education needs to be viewed as core business and invested in accordingly, by committing to it a level of priority and resourcing equitable with on-campus education. This investment and commitment, when clearly voiced and actioned at an institutional level, will dispel the notion of its being 'secondary education' and instead will create an environment in which online students have greater opportunities to persist with and complete their studies.

TRANSLATING INTO ACTION:

An institution recognises that investment in engagement and support of online students leads to improved retention and completion.

This is demonstrated by such means as:

- online teaching recognised appropriately in the academic workload model
- consultation with experienced academic staff, including sessional teaching staff, to set benchmarks for realistic online class sizes and paid hours required for effective teaching and support
- programs that improve online student engagement, satisfaction, retention and/or academic success receive dedicated, ongoing funding
- investment made in technology improvements, including learning platforms, learning design, learning tools and data analytics to deliver an engaging and positive online student experience

More ideas:

- *Standards for Online Education* (Parsell, 2014) <https://www.onlinestandards.net/>
- Salmon, G. (2014). Learning Innovation: A Framework for Transformation. *European Journal of Open, Distance and e-Learning*, 17(2), 219-235

Introduction

About this Research

Online learning has a critical place in widening access and participation in higher education for a diverse range of students, many of whom are from backgrounds which have been historically underrepresented at university. Students from low socioeconomic backgrounds, students with disability, regional and remote students, Indigenous students, and students who are first in their families to enter university (first-in-family) are represented particularly strongly in online undergraduate programs. However, both retention and completion rates for online students are considerably lower than amongst those studying face-to-face. As a result, concerns about student retention and academic achievement within online studies have been emerging across the global higher education sector. The research discussed in this report has been conducted for a national Australian study with UK participation to address these concerns. It has been supported and funded by the Australian Government Department of Education and Training, through the 2016 Equity Fellows program run by the National Centre for Student Equity in Higher Education. During 2016, interviews were completed with 151 academic, professional and management staff, drawn from 16 higher education institutions (15 in Australia and the Open University UK). The interviews investigated the practices and strategies being used within the online higher education context, including planning, teaching, support and education delivery, and the extent to which these practices are effectively supporting students to stay and succeed.

The online learning context that is examined in this report is largely undergraduate online education, undertaken by students enrolled at universities in a distance or external mode, with some attention also given to online enabling, pathways or other preparatory courses that can be taken prior to or in conjunction with undergraduate studies. There is also some mention of postgraduate online study, particularly where students are entering university studies for the first time, having gained entry to their degree via recognition of prior learning through previous vocational level studies and/or work-based training and experience. This report does not examine Massive Open Online Courses (MOOCs).

The report includes a set of *National Guidelines for Improving Student Outcomes in Online Learning (National Guidelines)* for higher education institutions; the aim being to improve the sustainability of online learning as a viable and inclusive model of education for all. These guidelines are one of the key deliverables of this research, as outlined in the original research project brief submitted to and accepted by the NCSEHE.

Rationale for the Research

Online learning has become a well-recognised part of the broader landscape of higher education. Increasing numbers of students of all ages and backgrounds, including those historically underrepresented at university, are embracing the opportunity to study online. In 2015, there were 405,697 commencing students in Australian higher education, with 54,769 (13.5 per cent) of these students enrolled in a fully external, online mode (2016 data was not available at the time of writing this report). This percentage has been growing each year, from 11 per cent in 2010, with further growth predicted. Available data indicate that mature-age and first-in-family students are more strongly represented in online than face-to-face studies (e.g. Open Universities Australia, 2015), as well as students from the Australian Government-identified equity categories of: low socio-economic status backgrounds; regional and remote areas; students with disability; and Aboriginal and Torres Strait Islander (Indigenous) students (DET, 2016b).

However, retention in online study has been shown to be at least 20 per cent lower than in face-to-face programs (Greenland & Moore, 2014; Stone, O'Shea, May, Delahunty, & Partington, 2016) and the

likelihood of online students completing their degree programs is considerably lower (DET, 2017). It is clear that improvements need to be made in engaging and supporting diverse cohorts of students to continue with and succeed in online education. Findings from the research conducted along with other international research findings have been used to inform the development of the *National Guidelines*, to provide sector leadership on evidence-based ways to improve the success and retention of students in online education. Through advising institutions on ways to improve outcomes for online students, the *National Guidelines* have the potential to make a significant impact in and beyond the Australian context by increasing opportunities for diverse cohorts of students to achieve their learning goals at any stage of life.

Background Literature

The following section provides an overview of research literature that focuses particularly on online learning over the past 10 years. With online being a relatively recent mode of teaching and learning in higher education, and one that has been changing rapidly with the advent of new technologies, there has been much debate and discussion over this period about its merits and its challenges. There is also a considerable body of research examining barriers to higher education for groups historically underrepresented at university, such as students who are mature-age, with disability, from low SES backgrounds, Indigenous, from regional and remote areas and from families where they are the first to attend university. Reference is made to this literature also, as there are inevitable connections between the barriers faced by these students and the role that online learning plays in widening access and participation. This review is divided into headings that represent some of the key discussions within these fields.

Widening Access

Much of the argument in favour of online learning centres on its capacity to improve access to higher education, providing students with the opportunity to balance study with other demands and responsibilities. For example, Knightley (2007) found in her study conducted at the Open University UK that, for the students she surveyed and interviewed, online learning “transcended geographical, physical, visual and temporal barriers to accessing education, and reduced socio-physical discrimination” (p. 281). Other research suggests that having to leave home or change location, or incur significant travel costs to go to university is a deterrent for those from families where university education is not the norm. It is expensive as well as time-consuming and disruptive, and many families cannot afford this extra burden (Michael, 2012; Park & Choi, 2009; Shah, Goode, West, & Clark, 2014; Stone et al., 2016). Park and Choi’s study (2009) conducted in the United States (US) found that “Distance learning allows adult learners who have employment, family and/or other responsibilities, to update knowledge and skills... by saving travel costs and allowing a flexible schedule” (p. 207). The potential to improve higher education access and participation in developing countries is also being recognised, such as by Chawinga and Zozie’s study (2016) which concluded that the growing availability of Open and Distance Learning (ODL) provided by Mzuzu University, Malawi, demonstrates “the potential of ODL programmes towards achieving universal access to higher education in Malawi... due to the flexibility of the programme whereby students are allowed to study while working” (p.16).

It has been argued that “the digital revolution has shrunk the world and provides new e-learning opportunities for disadvantaged and advantaged alike” (Abbott-Chapman, 2011, p. 22). There is indeed evidence that online learning is playing an important role in creating such opportunities. For example, with Australia’s long history of Indigenous educational disadvantage (Behrendt, Larkin, Griew, & Kelly, 2012) it has been argued that “external modes of attendance could... be potentially beneficial for enabling Indigenous students to navigate the complex terrain of juggling family life, community responsibilities and financial issues of economic disadvantage while pursuing higher education degrees” (Smith, Trinidad, & Larkin, 2015, p. 23). Students with disability also face particular challenges in higher education (Kilpatrick et al., 2016) with online study being, for many, “a preferred way to access higher education” (Kent, 2015, p. 2); while for the underrepresented cohort from regional and remote areas in Australia (Cardak et al., 2017) online education serves an important role in “enabling regional students to access higher education while remaining in their communities” (Regional Universities Network, 2017). Similarly, online study offers an opportunity for “those who are older with responsibilities of family and work” (Stone et al., 2016, p.163) to participate in higher education.

Open-entry pathways into higher education have traditionally had an important place in improving access to higher education, particularly for mature-age students (Stone, 2008), including the many who are first-in-family (May, Delahunty, O’Shea, & Stone, 2016). Providing such pathways online has

the potential to improve access even further, with “the delivery of enabling programs online provid[ing] access and opportunity for many disadvantaged students” (Shah et al., 2014, p. 49). There have been calls for improved partnerships between the Vocational Education and Training (VET) and higher education sectors, using digital technologies to reach out to students within their own communities, to empower them to make their own choices about what, when, where and how to learn, including transitioning more easily between these two education sectors.

Universities and VET institutions must become learning hubs, rather than silos, connected with each other at many levels, and with the communities in which they are set. Flexible and online delivery means that globally connected learning spaces are activated by the learner rather than the teacher, as facilitator, preparing and supporting them, enabling them to create their own learning biographies (Abbott-Chapman, 2011, p. 17).

Barriers to Ongoing Participation

Despite the greater opportunities for access to higher education, online study has its own particular challenges in terms of student engagement, persistence and success. A DET report (2017) looking into completion rates of domestic undergraduate students in Australia, shows that of those students who enrolled in 2005, only 46.6 per cent who had enrolled as fully external (online) had completed their degree programs by 2014, compared with a completion rate for face-to-face students in the same time period of 76.6 per cent. Further, first year attrition for these online students was more than 20 per cent compared with less than seven per cent for the face-to-face students. Interestingly, the proportion of fully external, online students who were still enrolled in 2014 – nine years after first enrolling – was higher than the internal students, at 8.1 per cent compared with 3.8 per cent, indicating that many online students take longer to complete their degrees in this mode. Perhaps this is not surprising, given the evidence that the online student cohort contains a high proportion of mature-age students with multiple responsibilities in their lives, such as family and work commitments, on top of their studies (Greenland & Moore, 2014; Müller, 2008; Park & Choi, 2009; Tyler-Smith, 2006). This is particularly problematic for mature-age women due to the gendered nature of expectations around family responsibilities and domestic work (Burke & Crozier, 2014; Gouthro, 2006; Hinton-Smith, 2009; Hook, 2015; McGivney, 2006; Pocock, Skinner, & Ichii, 2009; Stone & O’Shea, 2013), with women “much more likely [than men] to feel rushed and pressed for time” (Pocock et al., 2009, p. 2) and to have their time for study “dictated by the need to ensure that it [does] not impinge on family time” (Stone & O’Shea, 2013, p. 103).

This same DET report (2017) showed that the completion rate for multi-modal (blended) study, where students are enrolled in on-campus mode and undertake a mix of face-to-face and online classes, was considerably higher than for the fully online students, at 70.6 per cent, indicating that the lack of any regular face-to-face teaching may be particularly challenging. Indeed, much of the literature indicates that the two-fold challenges of understanding e-learning technology, along with a sense of isolation, are key issues for online students. The technology associated with online learning can be overwhelming for “novice adult learners” (Yoo & Huang, 2013, p. 160), while the convenience factor of studying online can be diminished by negative factors such as technical problems, lack of interaction with tutors and other students, problems with instructional materials and students’ own difficulties with time management (Ilgaz & Gülbahar, 2015).

However, there is evidence to show that student satisfaction with online learning can be improved through the use of online learning tools to assist students to better understand the technology, and to connect with other students and tutors more easily.

For students from non-traditional backgrounds, social presence in particular is vital to creating a learning environment conducive to students feeling connected to each other and their respective tutors (Lambrinidis, 2014, p. 257).

So while on the one hand the flexibility of online learning improves access for underrepresented groups, on the other hand persistence can be more difficult. For example, a US study of mature-age women in online education found that they were not only struggling with the multiple responsibilities and unpaid time demands of family and domestic work that, as previously discussed impinge upon their study time in general, but also that “insufficient interaction with faculty, technology, and coursework ranked highest as barriers to women’s persistence” (Müller, 2008, p. 1). This study explicitly calls on institutions to “factor... in the varied demands on working women’s time that may cause the interruption of their studies” (Müller, 2008, p. 12). It needs to be recognised that women are more likely to be carrying a double load of work - both paid and unpaid.

A New Zealand study identified technology issues, in particular, “negotiating the Learner Management System (LMS) interface” (Tyler-Smith, 2006, p. 79) as a significant factor in online student attrition. This included the various media contained within the LMS, such as learning content, discussion forums and the like. Such findings have been replicated in a more recent Australian study, which identified technology and time-management skills, in addition to “work-related factors” and “personal reasons relating to health and family commitments” (Greenland & Moore, 2014, p. 53) as significant factors contributing to online student attrition.

There is evidence that family, community and workplace relationships can play an important role in encouraging online students to persist with their studies, despite the difficulties. “Adult learners are more likely to drop out of online courses when they do not receive support from their family and/or [work] organisation while taking online courses, regardless of learners’ academic preparation and aspiration” (Park & Choi, 2009, p. 209). Research with online students who are first-in-family has shown that “family members, friends and colleagues play a crucial role in providing first-in-family students with inspiration, encouragement and ongoing support” (Stone et al., 2016, p. 164). Course and program design also plays an important role. Design needs to take into account the diversity of students involved, using a range of activities and ensuring that content is relevant, relatable and does not alienate. For example, in their work on improving outcomes for low SES students in online learning, Devlin and McKay (2016) discuss “the importance of using multimedia and of choosing formats and content that represent the students’ experience” (p. 98). Various studies indicate that in designing online courses, there is a need to “provide robust and comprehensive instructional support systems” (Yoo & Huang, 2013, p. 160) and “stimulate their active participation and interaction and meet their expectations” (Park & Choi, 2009, p. 215). Each of these studies, as well as a number of others (for example, Reedy, 2011) stress the importance of students’ receiving support with technology, to improve their technical competence and hence their confidence with online study.

As vital as these recommendations are, there is much evidence to suggest that it is the human interactions, particularly teacher-student and student-student, which occur within the virtual classroom setting, that are perhaps most important of all in improving retention and academic success for online students. This evidence is outlined below.

Relationship-Building Through ‘Teacher-Presence’ and Interactive Learning

Much of the literature in relation to online teaching emphasises the role of ‘teacher-presence’ in building relationships between students and teachers, and between students and other students. Many researchers argue that, to achieve a strong sense of teacher-presence and hence reduce feelings of isolation for online students, the skilled use of technology needs to be combined with

sound pedagogical principles (Anderson & Dron, 2011; Field & Kent, 2006; Kuiper, Solomonides, & Hardy, 2015; Salmon, 2014).

Anderson (2009) describes “the dance-like relationship between pedagogy and technologies” (p. 1) in which students and teachers are:

dancers [who] may meet synchronously (chat, web, audio or video conferencing) or asynchronously (voice or text messages, email, blogs and Twitter). Critical to finding each other is the concept of presence (p. 5).

Inclusive learning design and content that is relevant and engaging, combined with the creative use of digital technology, are all emphasised as important in helping to create this sense of ‘presence’ to engage students and to encourage meaningful and learning-directed communication with and between them online. There are multiple examples in the literature of innovative ways of achieving this, such as synchronous and asynchronous interactions, through discussion boards, blogs, chat rooms, wikis and social media; creative use of video, audio-clips and vignettes; assessment tasks that are paced, scaffolded and provide prompt, constructive feedback; both individual and small group work, well facilitated; and matching technology to the task (Boton & Gregory, 2015; Canty, Goldberg, Ziebell, & Ceperkovic, 2015; Kuiper et al., 2015; Lambrinidis, 2014; Michael, 2012; Moore & Signor, 2014; Oh & Kim, 2016; Panther, Wright, & Mosse, 2012; Parkes, Hawkes, & Landrigan, 2013).

Some specific examples from the literature include: the use of a Conversational Framework (Laurillard, 2002), in which a conversational approach is taken in discussion boards and content, to encourage “active learning” (Field & Kent, 2006, p. 1); learning communities becoming “more inclusive” [when] e-learning facilitators and e-learners alike [develop] online listening’ skills” (Hughes, 2007, p. 718); using “relationship-building strategies” in online teaching to reduce students’ “feelings of aloneness and isolation” (Resop Reilly, Gallagher-Lepak, & Killion, 2012, p. 104); the critical importance of “instructor immediacy in motivating participation” (Kuyini, 2011, p. 11); and the ways in which social media can “serve complementary purposes to a LMS [to] boost collaboration, enhance networking, and improve learning experiences and outcomes” (Salmon, Ross, Pechenkinac, & Chase, 2015, p. 11).

Shackelford and Maxwell (2012) remind us that:

in this age of dazzling technology, there is still no substitute for interaction, and there must be opportunities for students to interact in multiple ways with their peers in an online environment (p. 7).

As part of this array of ‘dazzling technology’ it has now become possible to teach and assess online what once would have been considered impossible, such as in the area of visual arts where pieces of artwork can be submitted and assessed online in a Fine Art degree program, illustrating that “online learning reflects the current technological advances and changing literacy of contemporary culture” (Nazzari, Cinanni, & Doropoulos, 2014, p. 106). Another example is that of gamification which is increasingly entering the online education sphere (de Freitas et al., 2012; de Freitas, Rebolledo-Mendez, Liarokapis, Magoulas, & Poulouvasillis, 2010). The higher education sector is indeed facing “a landscape unrecognisable only a few years ago” (Salmon, 2014, p. 1) due to the rapid growth in online learning and the digital technology which makes it possible.

Institutional Responsibility

In order to meet both the challenges and opportunities associated with this rapid change, Salmon (2014) proposes “a framework for transformation” (p. 219) in which “easy-to-use technologies and investment in personal and departmental learning and development” are prioritised. Salmon and

other researchers are increasingly emphasising the need for universities to develop clear institutional strategies for online education to ensure that academics are equipped to teach online; that appropriate digital resources are both available and understood; and that students and staff are well supported in this new and often unfamiliar environment. Anderson and Dron (2011) make the point that both “distance educators and students [need to be] skilled and informed to select the best mix(es) of both pedagogy and technology”. Within the Australian context, Parsell’s “Standards for Online Education” (2014) make a valuable contribution. Developed in collaboration with “approximately 170 researchers and practitioners from across the sector in Australia” (p.14) the standards stress that it is vital not only for staff to be “supported in their online teaching with quality professional development, resourcing and technical support” (p. 22) but also that the “organisation supports online education through the provision of quality leadership, infrastructure and evaluation” (p.22). First and foremost is that “the organisation has a clearly articulated strategic position on online education” (p. 22).

Part of this strategic position needs to include recognition of the nature of the online learning cohort, so that program design, teaching and student support services can be better matched to this cohort. Institutions need to be “taking into account the nature and diversity of the cohort and their particular needs when designing the unit” (Kuiper et al., 2015, p. 243) and “willing to try to accommodate the diverse and often complex needs of these students [including] providing appropriate and timely outreach and proactive support” (Stone et al., 2016, p. 164). Other research has found that “it is important to consider learners’ situation while managing or maintaining the course so that learners can get help if needed” (Park & Choi, 2009, p. 215) and that “educating university staff about students’ potential motivations and the realities of online learning may... aid in managing student expectations” (Henry, Pooley, & Omari, 2014, p. 7).

Institutional measures to engage online students via support mechanisms, such as online orientation, outreach phone calls, email and text messages, as well as the provision of online and/or telephone academic advising and personal support, have been shown to contribute to student persistence and retention (Gravel, 2012; Heyman, 2010; Nichols, 2010; Simpson, 2013; Stone, Hewitt, & Morelli, 2013; Woodthorpe, 2015). At a basic level, these can include communications to students that are timed to coincide with known ‘risk’ points, such as start of semester or study period and in the lead-up to exams and assessment due dates. They can also be targeted towards students who are seen to be more likely to be at-risk of attrition, such as students new to online university study and students who have missed assessment dates or are performing poorly in assessments. In a pilot program at Open Universities Australia (OUA), new students who were telephoned by academic coaches within the first three weeks of beginning their studies, showed a 50 per cent increase in the pass rate when compared with a matched control group, as well as an 18 per cent increase in re-enrolment within the next two study periods (Stone, 2013). Similarly, ‘at-risk’ students who were telephoned by their class tutors in a pilot study at the OU (UK), passed at nearly twice the rate as those ‘at-risk’ students not contacted (Woodthorpe, 2015). This ties in with the importance of relationship-building as discussed previously, with the more immediate and personal nature of a phone call helping to build or strengthen a relationship more quickly and deeply than simply relying on online communication. Such interventions can be particularly effective when institutional student data derived from digital technology is used strategically, as testified by researchers in the field of learning analytics (Dietz-Uhler & Hurn, 2013; Kelly, Coates, & Naylor, 2016).

Use of Data and the Role of Learning Analytics

A better understanding of data about learners and their learning can help universities to tackle high attrition rates, which result in adverse impacts on the lives of those affected, and wasted expense for the institutions (Sclater, Peasgood, & Mullan, 2016, p. 8).

Universities offering online studies are increasingly making use of student data, garnered in particular from learning management systems and platforms to target interventions, personalise learning and improve outcomes for online students (Avella, Kebritchi, Nunn, & Kanai, 2016; Brown, 2012; Dietz-Uhler & Hurn, 2013). Brown (2012) defines Learning Analytics (LA) as the process by which institutions use large amounts of student data, gathered from their internal online systems, to improve student learning outcomes. In their literature review of Learning Analytics in higher education, Avella et al. (2016) report that, “the purpose of LA is to tailor educational opportunities to the individual learner’s need and ability through actions such as intervening with students at risk or providing feedback and instructional content” (p. 2).

A number of international examples of recent developments in this field are outlined in both the 2016 Horizon Report (Johnson et al., 2016) and the JISC Report (Sclater et al., 2016). Examples include the Predictive Analytics Reporting (PAR) Framework at North Dakota and Maryland Universities in the US, the Higher Education Quality Council of Ontario Learning Outcomes Assessment Consortium in Canada and the piloting of an online adaptive learning and course delivery tool at the University of Edinburgh in Scotland. “Data-driven projects at colleges and universities are starting to reveal promising results. Many are leveraging dashboards, visual representations of data that are integrated in the LMS, to personalize the learning experience” (Johnson et al., 2016, p. 17). Case examples within Australian institutions include the Connect for Success Program at Edith Cowan University; the Early Alert Program at the University of New England; the Social Networks Adapting Pedagogical Practice initiative at the University of Wollongong; and the Personalised Adaptive Study Success program at Open Universities Australia (Sclater et al., 2016). Another international example is that of the work taking place at The Open University UK, where an ‘analytics mind-set’ (Sclater et al., 2016, p. 34) is being consciously developed across the institution. Data from the VLE (Virtual Learning Environment) is being used to proactively identify and reach out to students who appear to be at-risk of academic failure and/or attrition through the development of predictive models (Herrmannova, Hlosta, Kuzilek, & Zdrahal, 2015; Kuzilek et al., 2015; Wolff, Zdrahal, Nikolov, & Pantucek, 2013).

To make the most effective use of the wealth of data available and to maximise learning outcomes for as many students as possible, there is a strong argument in favour of universities making “greater strategic use of education analytics” (Kelly et al., 2016, p. 44). A recent Australian study of the experiences of university teaching staff with learning analytics in relation to student retention (West et al., 2016) found that “participants generally expressed a high level of interest in learning analytics, but their participation in learning analytics was limited, particularly in a collaborative way” (p. 58), indicating that there is a need for universities to “collaboratively build capacity around learning analytics and support people across all levels of the sector to better understand potential uses” (West et al., 2016, p. 59).

Some researchers in this field do however provide words of caution as to how this data might be used. There is concern expressed about taking a ‘deficit’ approach:

Analytics implementations seem to be primarily concerned with students poised to fail. This constant language of “intervention” perpetuates an institutional culture of students as passive subjects—the targets of a flow of information—rather than as self-reflective learners given the cognitive tools to evaluate their own learning processes (Kruse & Pongsajapan, 2012);

also about ethical considerations, in which institutions need to acknowledge “the role of power, the impact of surveillance, the need for transparency and... that student identity is a transient, temporal and context-bound construct” (Slade & Prinsloo, 2013, p. 1511). This raises issues around the need for informed consent from students, ethical use and storage of data and not ‘locking in’ assumptions about students simply based on previous behaviour or activity. “The dynamic nature of student identity necessitates that we take reasonable care to allow students to act outside of imposed algorithms and models” (Slade & Prinsloo, 2013, p. 1519).

In Summary

Over the past 10 years a broad range of research has been conducted into online learning in the higher education sector globally. There is much enthusiasm for what can be achieved through online delivery of education, particularly from the perspective of widening access for underrepresented groups, but similarly there is widespread concern over the higher attrition and lower completion rates for online students compared with those studying face-to-face. There is debate over the extent to which this can be attributed to the more diverse nature of the online student cohort or to the challenges inherent in the mode of delivery. Most researchers agree that it is most probably a mixture of both to varying degrees; and that policy makers, administrators, teachers, researchers, learning designers, student support practitioners, IT specialists and data analysts all have a role to play in continuing to seek ways to maximise the opportunities afforded by online learning. As this mode of delivery becomes more effective, more students from a diverse array of backgrounds will be able to not only access higher education, but also to fully participate and complete their programs of study.

Research Method

Overview

This study was designed to complement the existing body of online student experience research. It investigated the range of practices and strategies within higher education institutions that are aimed at improving the academic success and retention of online undergraduate students. Interviews were conducted with 151 individual academic and professional staff members, across a total of 16 higher education institutions, which consisted of: 14 Australian universities offering both online and on-campus studies; Open Universities Australia which enrolls students into online higher education studies, largely by open-entry, across 13 Australian universities; and The Open University UK, which provides open-entry distance education, delivered primarily online. The interviews aimed to seek the combined wisdom of education practitioners, both academic and professional, about ways to improve outcomes for online undergraduate students. The data from these interviews in combination with other related research and literature has informed the development of the *National Guidelines for Improving Student Outcomes in Online Learning*.

Data Gathering

Institutional consent to participate in the research was sought from: the OU; OUA; seven Australian universities which were the key providers of online undergraduate education offered through OUA; as well as nine other Australian universities offering online degrees. Of the 16 Australian universities approached, 14 agreed to participate, as did the OU and OUA (see Table 1). Expressions of Interest (EOIs) inviting staff to participate were sent via senior staff of each consenting institution to academic and professional staff involved in online education, including the support of online students. A snowballing approach was also used, with the EOI inviting recipients to distribute the invitation to other relevant practitioners.

Once potential interviewees indicated their interest in participating, they were sent the Participant Information Statement (PIS), Consent Form and Interview Schedule. Those willing to participate signed the consent form and, wherever possible, were offered a face-to-face interview at their place of work. Where this was not possible they were given the choice of a telephone or Skype interview. All participants were advised in writing on the PIS and verbally at the start of each interview of the right to withdraw at any point. They were also advised that no staff member would be identified nor would any identifying student data or institutional practices be identified, unless further institutional permission was expressly sought and provided. All records and data have been kept electronically in a password protected file on the University of Newcastle's secure cloud service; they will be securely stored for a period of five years beyond final publication of reports and other related publications, after which all records will be deleted.

Interview Process

Interviews were semi-structured, designed to elicit a conversation. All interviews were conducted by the author of this report and were of approximately 45-60 minutes in duration. An interview schedule consisting of several prompt questions was used to begin the conversation and encourage the interviewees to expand more broadly on their experiences and interventions (See Appendix 1). Participants were sent the interview schedule in advance so were aware of the questions. Each interview was audio recorded and transcribed by a professional and confidential transcription service. The participants were offered the opportunity to review their interview transcript and to edit or delete any parts of their responses if desired. All participants were offered the opportunity to receive updates via email on the progress of the research and were offered a copy of the final report. At each institution, the person responsible for providing institutional consent was kept informed of progress and

was provided with a copy of the draft report before any publication or distribution; to which they could request edits or deletions of institutional information at any time.

Participants

Table 1 below shows which universities participated, how many staff members were interviewed at each institution, at what point in time during 2016 these interviews were conducted, which universities were OUA providers and to what extent.

Table 1

	Participating Institutions	No. staff Interviewed	When in 2016
1	The Open University UK	22	March/April
2	Open Universities Australia	13	May
3	Swinburne University **	12	June
4	RMIT University **	12	June
5	Murdoch University **	10	June/July
6	Macquarie University **	5	May/June
7	Curtin University **	16	July
8	La Trobe University *	2	July
9	The University of Newcastle	3	July
10	The University of Southern Queensland	11	September
11	The University of New England *	10	September
12	Charles Darwin University *	8	September
13	The University of Tasmania	10	September
14	Southern Cross University	6	September
15	Charles Sturt University	2	Sept/Oct
16	Flinders University	9	October

***Key OUA provider universities, *Deliver limited OUA units/courses*

Out of the 15 participating Australian institutions, 14 were universities and one (OUA) was a private company, owned by seven Australian universities, offering open-entry online access to higher education in partnership with 13 Australian universities which provide the education. Of the 14 participating Australian universities, eight were provider universities for OUA to varying extents; five of these eight being key providers, offering an extensive range of OUA undergraduate units and courses across disciplines, while the other three offered a more limited range of OUA units. Each of these eight universities also offered their own internal online programs, either undergraduate, postgraduate or both. The 14 Australian universities were located in metropolitan, regional and remote locations, in every Australian state and the Northern Territory. Each had a substantial cohort of on-campus students. In the metropolitan universities, the online cohort was in the minority, while at the regional universities of the University of Southern Queensland, New England University, Charles Darwin University and Charles Sturt University, external students studying online formed the majority.

The OU, with its long history of providing distance education to a large and diverse student cohort throughout the UK as well as internationally, was an important contributor to this research. It provided not only an international perspective, but also the perspective of a university that delivers open-entry education exclusively to distance students. The OU, as well as two of the Australian universities, offered fully online enabling/access courses as a pathway into undergraduate degrees.

Amongst the staff who agreed to be interviewed there were many different positions and titles. These included Vice-Chancellor (1), Pro-Vice Chancellor (3), Dean (1), Chair (1), Director or Assistant/ Associate Director (31), Head or Deputy Head (8), Manager, Senior Manager or Executive General Manager (27), Academic Registrar (1), Team Leader (4), Officer/Advisor (20), Student Counsellor (1), Coordinator/Convenor (33), Tutor or Staff Tutor (3), Training Developer (1), Learning Designer (2), Data Scientist (2), Lecturer or Senior Lecturer (17) and Faculty Lead or Faculty Rep (2). Some staff members had more than one title.

While some staff members performed a mixture of roles, 70 of those interviewed were primarily in academic roles, 75 in professional roles, while six were at senior executive levels of Vice-Chancellor, Pro-Vice-Chancellor (3), Executive General Manager and Academic Registrar. Professional staff represented a wide range of areas including Library Services, Learning Design, Student Support, Student Retention, Student Engagement & Success, Language & Learning, Equity & Diversity, Disability Services, Careers, Training & Development, Planning and Data Analytics. Academic staff were drawn from many different disciplines, schools and faculties, including Humanities, Arts & Social Sciences, Politics, Education, Business, Law, Science & Mathematics, Fine Arts, Media & Communications, Engineering, Architecture & Built Environment, Computing & Information Technology (IT), Health, Nutrition, Nursing, and Psychology.

All participants were involved in the planning, development and/or delivery of online education, or in the planning, development and/or delivery of engagement, support and retention strategies for online students. The primary responsibility of nine of the participants was in the area of online pre-degree programs, such as pathways, enabling, foundation and preparatory courses and one interviewee had primary responsibility for online postgraduate students; all the others were directly connected in some way with online undergraduate studies. A number of participants were involved across different areas of the institution and with different student cohorts.

Analysis of Data

Each interview was transcribed shortly after the interview had been conducted. Initial analysis was conducted using manual line by line analysis in order to identify emerging key themes. To some extent, drawing on the literature assisted with interrogation of the data, however, as much as possible the data was approached from a position of open-mindedness, to allow the data to speak for itself. Themes began to emerge from the data quite quickly due to very similar issues, thoughts and views being raised by participants over and over again. Based on these, thematic codes were developed and NVivo 7 was used to manage the data. As the data was further interrogated, other emerging themes were identified and included.

Progress Bulletins

A series of brief progress bulletins was sent to all participants who had indicated on the consent form that they would like to receive regular updates on the progress of the research. These were also sent to the institutional representatives which had organised and/or provided institutional consent. Six progress bulletins were sent during 2016 (see Appendix 3), the first one in May, then each month until October/November. A seventh bulletin was sent in February 2017, specifically to seek feedback on the draft *National Guidelines*. Participants were invited to distribute the bulletins to interested others, who in turn were invited to join the mailing list. From this, and from other publicity such as conference presentations, the mailing list increased to a total of 250 recipients. An additional 13 participants indicated that while they would not like to join the mailing list for progress bulletins, they would like to receive a copy of the final report. Each progress bulletin was uploaded to the NCSEHE website at <https://www.ncsehe.edu.au/news-events/newsletters/>.

Transferability and Limitations

There are inevitably some methodological limitations to this research. Firstly, the qualitative nature of the research meant that participants were being asked for their views, based on their experience, of the challenges facing their particular student cohort/s and the ways in which they try to address these challenges; these responses are by nature subjective and therefore any extrapolation needs to be undertaken with caution. However, the wider body of knowledge of the online student experience, consisting of other research both national and international, also informs the findings contained within this report. Care has been taken to ensure that findings derived from qualitative interview data are also supported by other research and/or other relevant data. Therefore, it is reasonable to assume that these findings are generally transferable to the wider context of online learning, certainly within Australia and to some extent internationally. Another possible limitation is that due to the ethical considerations of the research anonymity of information has been preserved, which means that it is not possible to connect particular people or institutions with any particular strategies discussed. However, where there is published material outlining examples of practices or strategies discussed, these have been cited and in some cases included as further ideas for institutions to complement the *National Guidelines*.

Findings

This section outlines the seven key findings that emerged from the analysis of the data, each one illustrated by examples of quotes from participants.

In order to preserve anonymity for participants, each is named by their title only, and each institution has been randomly allocated a letter between A and Q so that it is clear that different institutions are being represented in the example quotes without identifying them. The allocation of these letters is not in the order in which the institutions are listed in Table 1, but instead, each letter has been randomly assigned with no particular pattern, further preserving each institution's anonymity.

Each key finding is introduced by a student quote. Although no students were interviewed for this particular piece of research, the quotes used are taken from two recent qualitative research studies in which online students were interviewed and surveyed about their experiences (O'Shea, Stone, & Delahunty, 2015; Stone et al., 2016). These quotes demonstrate that there is congruence between the online student voice and the voices of the staff who are teaching and supporting them.

1. A Strategic, Whole-of-Institution Approach is Required; One That Recognises and Values the Important Role of Online Education

“Universities don't really care about or engage with online students very much. In fact, I think a lot of them think external students are a burden they would rather not have to cater for”
- Online student

As mentioned earlier in this report, in all but four of the 14 participating Australian universities, on-campus students were in the majority. Many of the interviewees from these universities voiced a perception that the delivery of online education was regarded by their university as being less important or of a lower priority than on-campus education delivery.

[Online] students have always been treated as kind of like the poor cousin and you don't worry too much about them. They were not expected to be of the same standard and yet many are of an extremely high standard. So it's really hard to get them to be taken seriously (Unit Coordinator, Institution K).

There was concern that this leads to a 'lesser' experience for online students.

I just feel like they're 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. I don't want them to be disadvantaged because they've chosen a particular mode of study and I really think it's important that we address that (Lecturer, Institution L).

This view was shared particularly by participants at the metropolitan universities, where online students were in a significant minority, however this was not always the case. As explained by one senior lecturer at a regional university where distance online students were in the majority, “Institutions tend to focus – I guess inadvertently focus on those students who we can see in the classroom”.

This 'out of sight, out of mind' phenomenon was a source of frustration for many staff. Trying to raise the profile of online education, to have it recognised at an institutional level as 'core business', was seen as an ongoing challenge.

It's not secondary education, and, you know, until the whole university thinks like that and it's core business, then we're always pushing things (Online Programs Coordinator, Institution G).

Participants overwhelmingly were calling for a whole-of-institution strategic approach, in which online education was explicitly recognised throughout their universities as ‘core business’. Three key areas emerged as needing particular attention within such an approach.

1A. UNDERSTANDING THE NATURE AND DIVERSITY OF THE ONLINE STUDENT COHORT

External online study attracts a wide diversity of students, particularly in undergraduate study, making it particularly important that institutions have a clear understanding of this diversity in order to deliver education in ways that are inclusive and relevant. Staff interviewed for this research were very aware of this diversity. They reported that online students were more likely to be older, less academically experienced, under more time pressure and having more external responsibilities such as full-time work and family than those who were studying on-campus.

It suits people who maybe are stay-at-home mums who may be struggling to get on campus, people who have jobs, work part-time, work full-time. It just makes the whole study process more flexible (Senior Professional, Institution C).

This creates challenges for both students and institutions, as many students are vulnerable as a result.

It’s the extra ball that’s thrown up in the air and it’s the first one that they’ll drop if things get tough (Course Coordinator, Institution L).

Mike Kent’s research (2015) with OUA students demonstrates the importance of universities “promoting a disability friendly environment” (p.151), particularly for online students, given that there are higher numbers of students with disability studying online than face-to-face.

I’m really particularly aware of... those students that are incapacitated in some way, whether that be mentally, with mental problems, psychological problems or whether they be physical issues (Lecturer, Institution K).

For online students living regionally or remotely, there are additional and significant challenges, such as:

difficulty often with internet access, particularly those in rural and remote areas – just the connectivity can be appalling at times for them (Student Advisor, Institution P).

For those living in metropolitan areas, which is the majority of online students in Australia, choosing to study online is more often about time and flexibility than not living close to a campus.

They can’t take time off full-time to come to campus. They live right next door... When we researched them and we did it by their postcode, we found that... most of them live right next door to a university in their state that offered a fully accredited course. The difference was, they didn’t offer it online and that was what those students had chosen to do (Program Coordinator, Institution G).

Universities are also providing distance education to students who are incarcerated in prisons. Prisoners are entitled to apply for admission to online degree programs, however this “brings its own issues with access to online materials” (Student Support Manager, Institution B). Some of these issues are described below.

They may have access to a computer and if we can supply something to them on a disc – as long as it’s been checked by the learning person at the individual institution, that’s okay –

but it's no good giving them just URLs or references or things like that and for some of the studies, nowadays, the expectation is that you can't successfully complete those studies without that sort of access. It's very difficult for those incarcerated students (Library Services Manager, Institution G).

The open-entry nature of OUA studies means that this student cohort is particularly diverse with 68 per cent aged 25 and over, 20 per cent being from low SES backgrounds, 22 per cent from regional and remote locations, seven per cent with a declared disability and 2.5 per cent identifying as Aboriginal or Torres Strait Islander (DET, 2016a, 2016b). Staff interviewed for this research who were teaching OUA students at a range of universities were well aware of this diversity, with one lecturer summarising:

not socially competent or confident...mums at home with kids... very, very high achievers who have full-time jobs who also want to get degrees... retirees... young students who are in remote areas who can't access campus... and they're not as experienced and they're often quite timid (Lecturer, Institution K).

This type of diversity is of course also reflected at the OU (The Open University, 2014/15), with OU staff talking about students "coming back to us later in life" and being "restricted or constrained in relation to their circumstances... in relation to caring, commitments in relation to employment, a whole range of things". Without a clear recognition of the diversity of the cohort, institutional norms can, for example "operate to sustain misrecognition of parental carework and how this influences engagement with higher education" (Hook, 2015, p. 129).

Many participants commented on the lack of information they could access about the students in their online classes, whereas in a face-to-face group they would at least be able to see the mix of ages and genders.

The only thing I know about the students is their name as they appear in the grade book in the course and if they put a location I know that. Otherwise, it's entirely up to what they disclose... so it's very, very difficult; we don't know anything. No gender, no age. They could be from 13 up – we have no idea unless they tell us (Lecturer, Institution K).

Clearly, "senior leaders have an important role to play in ensuring that relevant data on student demographics is provided at the appropriate times in usable formats for staff who need it" (Devlin, Kift, Nelson, Smith, & McKay, 2012, p. 39). Making this information more readily available can reduce assumptions and enable institutions and staff to understand students' backgrounds, knowledge and strengths, in order to tailor teaching and interventions more appropriately.

A lot of my students are in their late 30s, 40s, 50s and 60s and they've got other stuff that's really important and... it necessitates a different look at the way we create a learning environment for them and it makes you double think about why things like strict assignment dates are so important. It makes you go "Well, are they really? What is the cost to the student and to the university and to society if we stick to some of those traditional ideas around course structure because I'll lose them?" (Course Coordinator, Institution L).

However, participants also stressed the importance of not taking a deficit view of the students but instead recognising their considerable strengths in terms of experience, commitment and resilience.

They're really conscientious students. They want to do this, they want that certificate at the end because they want to progress their careers and traditionally, they do really well (Senior Academic, Institution G).

Many of the participants talked of ways in which they aimed to build upon these strengths by encouraging students to appreciate and draw upon their past and current life and work experience to aid them in their studies, rather than discounting it.

If there's an Education student, a mother who's got three kids who's returning to... or going back to work, wants to be a teacher, doing Education, she might be running the P&C, doing reading groups at school, all of which are relevant to their course of study... it came to me sort of an epiphany when one student... I said "Well, you tell me what you do" and she said "I'm just a mum. I just run the P&C, I organise the \$100,000 fete every year" and all these other things... (Student Engagement Manager, Institution O).

This resonates with other research findings such as that of Signor and Moore (2014) who talk about "the capacity for online education to do more than just cater for students from diverse backgrounds" (p. 311) but instead, to regard the presence of such students as an asset. "This diversity can enrich online programs when mature age students are encouraged to utilise and share their knowledge and experiences with peers and educators" (p. 312). Research into improving outcomes amongst university students from low SES backgrounds (Devlin, 2013a) and first-in-family students (O'Shea, May, Stone, & Delahunty, 2017) similarly rejects a deficit approach and calls for recognition and appreciation of the different knowledges, experiences and strengths that such students bring with them to their studies.

Appreciating students' circumstances and strengths can enable a more personal approach and, where possible, greater flexibility. However, participants were sometimes frustrated by institutional regulations that made flexibility problematic. For example, a student engagement and retention program coordinator made the comment that, "I don't think we're moving quickly enough to be responsive to the sort of students that we're accepting..." while an academic with responsibility for an online pathways program expressed the view that:

Fundamentally, there's not the degree of flexibility that... a proportion of students... would like there to be in order to be successful... I think institutions could do more to be a bit more accommodating and flexible in their approach to supporting students (Access Programs Director, Institution J).

Only through a deeper understanding of the students can more flexibility be put into practice. Currently, many staff do not find it easy to access even demographic information on their students, particularly when student data is not routinely separated into on-campus and distance enrolments. At one university where there was an institutional practice of making demographic information available to staff via a pie chart where staff could "drill down to see who it is and then what their grades look like and everything else" (Teaching & Learning Director, Institution N), staff reported this to be:

immensely helpful in at the very least giving you a sense of who your students are so instead of looking at the general stats for the whole university or maybe at best, your whole school, now you can actually look at "Okay, well what is the make-up for my units" and you can start to think about that more meaningfully (Training & Development Manager, Institution N).

Such a relatively simple measure can help staff to begin to develop a picture of the diversity within a particular group from the outset, assisting them to engage with the students more quickly and to be more understanding of and responsive to their learning needs.

1B. ONLINE EDUCATION AS 'CORE BUSINESS'

A view expressed by many participants across the Australian universities was that teaching and support for online students was under-emphasised and under-resourced. This included concerns about the high numbers of casual (or sessional) staff employed to do much of the online teaching, as well as pay rates and the number of hours assigned to online teaching.

You're relying on people who are part-time and... because they're so poorly paid, they hardly ever post to forum, they give very little feedback because... the pay is one hour per student for marking and... there's no way that you can do that in an hour (Unit Coordinator, Institution P).

The casualisation of the academic workforce can be particularly problematic within online learning, where there is such student diversity. A recent study looking into inclusive teaching practices for diverse student cohorts, particularly those from low SES backgrounds, talks about the "impact that casualisation may have on expectations for inclusive practices", making the point that with the "precarious nature of employment for a large segment of teaching staff... it is difficult to expect people to enact inclusion when they do not feel included or valued in the institution" (O'Shea, Lysaght, Roberts, & Harwood, 2016, p. 332). These authors raise the question, "how can staff make others feel included when they feel excluded?" (O'Shea et al., 2016, p. 332).

It was not only the resourcing for online teaching that was raised as a concern by participants, but also the resourcing for other student activities, such as support and retention programs. One staff member had won a university award for the student retention benefits of a support program for online students, yet the funding for this program was insecure year-to-year, resulting in difficulties in running the program effectively.

It's totally uncertain [funding] and it's always late. When it comes, it's late so you're always trying to play catch-up and for a program to be effective, it needs to be there, it needs to be there; they just sign up in Week 1, ready to run in Week 2 and sometimes I don't get notification of funding 'til Week 1... (Student Advisor, Institution O).

Participants stressed the importance of resources being allocated appropriately for support services to ensure that online students receive equitable and sufficient access to these, as part of the core business of online education.

There is a bit of a gap in resources to support the online students and I would love to have more, you know, something that we can do to engage them and encourage them to participate in the services that we have available for them (Career Services Team Leader, Institution H).

This includes the provision of after-hours services to better cater for the different needs of online students.

We are working with a relatively traditional HR and staffing model... that says you're on a contract, that says "We need you here, somewhere for 7 point-something hours between 8:00am and 6:00pm and occasional overtime possibly". How do we then meet the needs of students who are working full-time, parents waiting for their kids to go to bed? As this fully online ramps up more and more, there's going to be big challenges for us in working out how we provide that level of service to people (Student Support Director, Institution C).

Such resourcing implications are significant challenges for institutions, but ones that need to be addressed if online students are not to be disadvantaged by the mode of study they have enrolled in. As discussed previously there are many amongst this cohort who, for various reasons, do not have the luxury of choice to study on-campus and it is imperative that they receive an equitable student experience.

1C. SETTING QUALITY STANDARDS

A recognition of online education as core business at an institutional level requires the development of quality standards, clearly articulated across all parts of the institution (Devlin & McKay, 2016; Parsell, 2014) encompassing online teaching and learning design as well as support, engagement and retention strategies.

Quality standards also need to be regularly reviewed under a continuous quality improvement process. In the words of one academic, “it’s got to be continuous quality cycle”. This particular academic adhered to this process and encouraged others to do the same.

One of the things I always say to teachers who are developing online courses is that it’s a continuous cycle of quality improvement... it never stops; you’re always finding better ways to communicate (Program Coordinator, Institution M).

Again, this needs to happen at an institutional level to ensure consistency, instead of it being dependent solely upon the commitment of individuals.

Along with quality and consistency of teaching goes the need for quality and consistency at an institutional level in the delivery of learning materials and content – particularly in relation to the learning platform. Achieving some basic consistency in the platform structure across faculties, schools and disciplines can be a significant factor in improving the online student experience.

Students overwhelmingly say that they want a consistent structure in their online learning experience (Teaching & Learning Director, Institution N).

For universities that teach OUA students who frequently study across more than one university, this is even more of an imperative. While these students may still have to struggle with different university systems, having consistency across each university can make a considerable difference.

I feel it’s important with [this university’s] units, they’re all navigated the same way. If I go onto a different university... and I think “Well, if that’s how they’re doing it and it’s taking me quite a while to navigate their website, what’s it like for all of the other OUA students who are changing from one university to the next?” It must be a nightmare (Course Coordinator, Institution H).

Hand in hand with institutional quality standards goes the need for appropriate staff development and training, to ensure the consistency of quality across all areas, such as by offering:

professional development courses for lecturers on a regular basis, and having internal groups where the online lecturers can exchange successes and failures and openly discuss and share... universities should provide it on a regular basis because technology is always evolving, there’s always something new... (Student Engagement Officer, Institution N).

The provision of appropriate and relevant staff training and development needs to be an institution-wide responsibility, ensuring access and encouragement for all working with online students to participate. A combination of strong leadership and adequate funding can make this happen.

We had some very good people in leadership who saw the value of resourcing certain initiatives and that money was well spent in terms of professional development. We were able to run tutor group meetings... and then we would run separate workshops in terms of online and what was required... we had a couple of really informative and very good communicators around technology (Faculty Dean, Institution G).

However, this research revealed that such opportunities could be dependent upon the particular drive and commitment of individual staff in leadership positions, rather than driven by broader institutional strategy. Where this was the case, there was an unevenness across different areas and faculties in terms of access to and encouragement for staff training. Many participants reported a lack of any support in their areas for training and development.

The big issue... is the lack of tutor training in external studies; we don't actually train people who are teaching in external units how to be a tutor online... and that seems to be a big area that doesn't have a lot of support – any support (Student Retention Coordinator, Institution P).

Participants made the point that online teaching requires a different skill-set from face-to-face teaching. It can therefore be quite daunting for staff if they are expected to simply pick up an online class with little or no training or experience, sometimes in addition to their existing face-to-face teaching load.

Teaching online is thrust upon staff and it's an extra thing to the face-to-face teaching. Staff are not given training in it... the sorts of expectations that have been put on staff are not being supported and underpinned by the support and training and development that they're getting (Lecturer, Institution L).

Even when training is provided, time and workload constraints can make it difficult to attend training.

I was motivated to learn how to do it whereas my office mate... he decided that it was too much work which it was actually; it was really a lot of work (Program Convenor, Institution H).

Most importantly, if training is not a paid activity, sessional staff are unlikely to be able to attend.

You don't get paid for doing it. It's there, but you do it in your own time (Lecturer, Institution K).

This raises again the issue of the reliance of universities on sessional teaching staff, working on contracts that have specified numbers of hours for teaching and in most cases do not include paid time for training. Research into the impact of contractual, sessional employment of academics in Australian universities has found that not only do “most academics work significant unpaid overtime” (Rawolle, Rowlands, & Blackmore, 2015, p. 6) but that being employed as a contracted academic “reinforces inequalities of pre-existing and unequal relationships that are not adequately considered when people commit to these contracts” (Rawolle et al., 2015, p. 8). These inequalities can lead to “a sense of powerlessness” for sessional staff (O'Shea et al., 2016, p. 332) and a situation where “the voices of casual staff are often absent in university policy” (O'Shea et al., 2016, p. 332).

In the words of one sessional participant:

You get that sense that sometimes you're a second-class academic.... we're not second-class academics; there's just no money to employ us full-time. We get it, but it shouldn't make us any less valued.... and I think just being valued makes a big difference to how a teacher performs and if a teacher is performing well and engaging with the students, the students will stay (Lecturer, Institution K).

2. Importance of Early Intervention to Connect, Prepare and Engage

“ I just felt uni didn't give me that hook to start; you kind of drowned if that makes sense. We need inductions and just orientations on just how to use stuff ”
- Online student

2A. ADDRESSING STUDENT EXPECTATIONS

For the many students coming into online study from a background of little prior experience with education and/or with multiple other responsibilities, early connection and preparation was viewed as being particularly important.

If you are a first-in-family student, you have a disability that could prevent you accessing higher education, you have a difficult work history or a difficult education history or low qualifications then how on earth can you pitch your expectations? (Senior Manager, Student Services, Institution B).

Concern was expressed that marketing activities can at times paint an unrealistic picture of online studies.

It's not as flexible as I think potentially we sell it to them and I think we need to be a little bit more up-front. I think if we set up a better, realistic understanding of what it's going to be like I think maybe more people would succeed (Project Coordinator, Institution F).

Participants also stressed the importance of taking the circumstances of individual prospective online students into account at the enquiry stage to avoid advising them to take on too high a study load than they will reasonably be able to manage.

I think that there's basically a one-size-fits-all sales approach... If they don't [go to] work, then they're recommended that they should do full-time study and... I don't think it should be the default. I think almost no-one who doesn't have a university background should be suggested to do full-time study right off the bat... you know, we lose a lot of students in the first week of study (Student Counsellor, Institution E).

The quote above reflects the unspoken assumptions that can be made in a 'one-size-fits-all' approach to student recruitment and prospective student advice, such as assumptions that people who don't 'go to work' must have plenty of free time, without considering the time-consuming unpaid responsibilities of, for example, women with families. Again, this illustrates the importance of a whole-of-university approach towards online education, with an institutional understanding of the diversity of the online cohort being an important part of this approach.

Amongst those interviewed, there were many examples of online strategies that were being used to help students understand the expectations of online study and gain a realistic sense of what they will be able to manage. These included clear information and advice on websites, with diagnostic quizzes, games and short videos; for example "a game for prospective online students that actually walks them through and shows them what it's really like and what things to think about when you're looking at an online university course" (Equity Manager, Institution G). A recent trial at Auckland University in New Zealand (Minhas-Taneja, 2017) indicated that interactivity through gamification enhanced engagement and participation in online orientation, with web analytics showing that new students were "more absorbed in pages that are gamified over pages that contain text" (p. 7).

2B. CONNECTING AND ENGAGING AS EARLY AS POSSIBLE

As one staff member phrased it, the institution needs to "place a greater emphasis at the front end" to ensure that:

students actually understand what they're taking on, making appropriate choices dependent on their previous educational qualifications and having an early contact with a human being at the university... prior to their course start (Senior Manager, Student Services, Institution B).

Post-enrolment, encouraging online students to participate in engaging and relevant orientation activities provides them with:

a really highly scaffolded entry into the online environment and online learning. That's where they meet the student liaison officer, they get a chance to engage in a discussion forum in that first week and introduce themselves and then they get to meet their lecturers during that week as well and then they go into their courses (Senior Lecturer, Institution O).

Strategies that are most engaging for new students are ones that reach out to them personally (Simpson, 2013; Slade & Prinsloo, 2015). While email contact is routinely made with new students, face-to-face or telephone is more engaging and successful. There are a number of ways in which this can be done, such as face-to-face orientation workshops on-campus for those online students who live near the university.

It's like a workshop session – we have been targeting students who live locally around each of our three campuses because having done a scoping of who our distance students are, most of them live around one of the three campuses... they get a personal invite with their name, to come to a face-to-face event, they come on campus ... to connect with each other, to connect with staff and to get some skills (Equity Officer, Institution Q).

For those further from the university, outreach programs can be established.

We have a team that travels to select locations around Australia, including major regional places... and we go and we actually visit our students one-on-one and have group sessions as well, so we literally jump in the cars and we go and visit students around the orientation period twice a year. We have regular catch-ups with students from there so we try to make a face-to-face connection for those online students (Student Engagement Director, Institution F).

Taking orientation out to students' communities, potentially enabling students to invite family, friends or colleagues to participate, is particularly important given the evidence that family and community understandings of university play a significant role in the retention and progress of online students (Park & Choi, 2009; Stone et al., 2016).

Telephone contact has also been shown to be a very powerful way to engage online students, with evidence that it impacts positively on student retention (Stone 2013; Woodthorpe, 2015).

What those students said was that [the telephone call] made them feel a sense of belonging to [university] because they'd spoken to someone that they felt knew them (Library Services Assistant Director, Institution G).

This can be done in a structured way, either centrally or through faculties and schools, as a means of greeting new students, checking how they are going and letting them know about support services if they are experiencing any glitches, through such means as:

the welcome campaign; so from O week through to Week 3 dialling out, having a conversation with students, welcoming them, making sure that they've got what they need... have a bit of a conversation (Student Support Senior Manager, Institution E).

Tailored programs for cohorts known to be at higher risk of withdrawal are also important, such as in the example below.

We also run a bespoke program for Aboriginal and Torres Strait Islander students who have been made a letter of offer... and we contact them to support them in turning that offer over to an enrolment with providing support... they're a high risk group and they come from non-traditional pathways and so we have a special program that supports those students and then they get handed over to the mainstream Indigenous supporter... we also run a low SES student resilience project where we contact students who are from low SES backgrounds, rural and remote... (Student Support Program Manager, Institution F).

However a number of participants at different institutions raised the fact that it can be difficult to provide early contact and information to new students who are accepted as late enrolments.

Students who come to us late, have a much more limited [chance] of retaining on that course because everything else gets in the way... most students need a longer lead-in time and an orientation... the lead-in time is absolutely key for our students (Student Services Senior Manager, Institution B).

2C. ENCOURAGING AND FACILITATING ACADEMIC PREPARATION

Institutions also need to consider how and where to provide introductory academic skills for the many new online students who are academically unprepared for university study, let alone studying online.

I think in terms of our first year students, we're not doing anywhere near enough to get them to a place where they're comfortable with being in an academic environment with the expectations of they really do need to be able to structure an argument, to proofread – all of those sort of basic things (Course Coordinator, Institution H).

Academic preparation for online students can be offered and encouraged through means such as the OU's access modules (The Open University, 2017) while within Australia, comprehensive enabling programs, generally run over a one or two semester time-frame, are offered by many universities. Some of these are offered online, such as Curtin's online UniReady program (Curtin University, 2017) and the University of Newcastle's online Open Foundation Program (The University of Newcastle, 2017b).

There are also examples of short, free preparatory courses such as the PREP units run through OUA (Open Universities Australia, 2017a). Evaluation has shown that students who start with a PREP unit are considerably more likely to persist with and pass subsequent undergraduate units (Stone et al., 2013). Another example is that of open-access, online academic preparation courses that are available to everyone, free of charge, such as OUA's Start for Success (Open Universities Australia, 2017b) and the University of Newcastle's Academic Survival Skills (The University of Newcastle, 2017a).

Actively promoting such options to prospective online students, via a range of channels, encourages more students to gain a basic level of academic literacy and understanding, and to develop skills and experience in learning online, before they begin their undergraduate studies.

3. The Vital Role of 'Teacher-Presence'

“ I'm sort of checking the discussion board to see if anyone's answered what I might have said or, or I'm waiting, yeah, yeah, I think just the isolation when you want that feedback ”
- Online student

3A. TEACHER-PRESENCE BUILDS A SENSE OF BELONGING TO A LEARNING COMMUNITY

Establishing a strong teacher-presence – that is, the sense for the student that the teacher is in the virtual room with them, interested in them and engaged with their learning – is crucial to the ongoing and constructive participation of online students in any given course. The online teacher needs to be communicating positively and constructively with students, both individually and with the class as a whole on a very frequent and consistent basis, so that students:

have an impression of there being someone on the other end of the system listening to them. So, communication and feedback, communication and feedback, communication... you can't communicate enough with online students (Senior Lecturer, Institution K).

It is the all-important relationship with the online tutor that is key to building a sense of belonging to a learning community.

If you have great content and a poor tutor, student satisfaction is low. If you have great content, great tutor – high satisfaction... it comes back to that community of learning (Program Coordinator, Institution G).

This relationship is also vital to building engagement with the institution as a whole – the means by which the student feels personally connected.

The tutor of the academic course is the face of the university... it is the human connection point between the student and the university (Senior Executive, Institution B).

Those who teach online know well the importance of this role and, when interviewed for this research, talked about ways of “creating your online presence”; providing “regular and engaged and interested interventions” as well as “a sense of personal contact”; ensuring that “the student feels cared for and feels they have someone to go to”; making sure that “the online environment [is] a welcoming space”; and that each student has “a personal touch point, so that they're not just a number”.

3B. TEACHER-PRESENCE IMPROVES STUDENT RETENTION

Devlin and McKay refer to the “changing role of educators” (2016, p. 101) particularly in relation to online teaching where “in the use of technology in teaching, there is less emphasis on the notion of the educator as sage on the stage and more interest in the idea of him/her as a guide on the side” (Devlin & McKay, 2016, p. 101). Undoubtedly, having a responsive, communicative ‘guide’ as teacher has a positive impact on student retention within courses. The evidence for this is not only anecdotal:

Where there's no responses to emails and no responses to discussion forums... the attrition rate's higher and the students are really unhappy (Unit Coordinator, Institution Q);

but is also measurable in terms of course retention figures.

They [tutors] are very consistent communicating – every day, every week and... this particular unit has a retention rate well into the 90 per cent (Faculty Dean, Institution G).

One of many other examples within this research is that of a Student Retention Coordinator who spoke about a “dramatic turnaround” in a particular unit in which previously “we had a high external drop out... and a lot of the students were leaving”. This changed in “the last two semesters it's been taught” with the loss of “only one or two external students”. In an evaluation with the unit coordinator

about the possible reasons for this significantly improved retention, the only change to have occurred was that there had been a new tutor in these past two semesters, who:

was a lot more engaging with the students and sending videos and basically making the space like a really open and honest discussion for the students and for them to be able to ask questions and then get a timely response... being a really open contact for students and really engaging with them in the conversations and those kinds of things, and timely feedback (Student Retention Coordinator, Institution P).

While teacher-student engagement is also important in face-to-face teaching, within online teaching it is even more crucial.

The engagement demands are completely different, the reliance of students on the instructor is much more intensive – basically you're it. The instructor is everything to the students (Course Coordinator, Institution M).

With this, comes the imperative to respond quickly and often:

I'm online every day. Even if I've only got a small number of students, I'm online at least twice a day just to make sure that everything is going okay and they can email me any time (Lecturer, Institution K);

also, the need to project a personal approach, that may include telephone calls as well as online communication.

I'll put a little bit about myself often in the emails, apart from formal introductions and I try to keep the language that I use sub-formal – not informal and slang but just a little gentler and more personal... Phone is really important actually if you've got an outstanding issue and you really need to resolve things in some way then a phone contact is very helpful for breaking the IT barrier down a little bit (Lecturer, Institution L).

Online teachers who are the most successful at engaging and retaining students are those who, by their attentiveness and responsiveness, "maintain a presence all the time" (Lecturer, Institution L). Other research supports the importance of "interactive and connected learning" (Devlin & McKay, 2016, p. 99) and talks of "the fundamental role of interaction in bringing an online learning community into existence and for building and maintaining interpersonal relationships" (Delahunty, Verenikina, & Jones, 2014, p. 253). Hence, teachers need sufficient time to develop and maintain a regular presence and to build relationships, in order to avoid a patchy and unsatisfactory experience for students.

I took over a course at short notice a couple of semesters back where the tutor hadn't been in [to the discussion forum] and there were posts up saying "Have we got a tutor? Does anybody know if we've got a tutor" which was pretty awful but she'd just got busy and, you know, had forgotten about it or something (Lecturer, Institution K).

3C. TEACHER-PRESENCE TAKES TIME

The insufficiency of allocated time to adequately meet the needs of students was frustrating for many.

It's very time-consuming and tutors aren't paid for it for that amount of time... we're not supposed to spend a lot of time on it... you're always chasing your tail because there's just not enough time (Lecturer, Institution K).

As a result, there were numerous examples of both sessional and full-time academics putting in many extra hours over and above their paid hours to provide a strong sense of teacher-presence for their students, mainly via interactivity and responsiveness in forum discussions; “they [tutors] just want to be in there every day” (Program Convenor, Institution G), but also through other media such as telephone calls and emails – “I estimated that I sent about 500 emails last study period... quite apart from the forum discussions” (Unit Coordinator, Institution P).

They were doing this because they knew how much it was valued by the students and what a positive difference it could make in terms of retention and completion.

We’re on duty seven days a week which I know we’re not supposed to but we do because it’s the only way that works is that if you keep the ball rolling. If they think “Okay, it’s Friday night, I’m not going to get a reply till Monday” then they lose interest and they’re all working so that’s the time when most of them do study (Unit Coordinator, Institution P).

I download my email to my phone and I’ll be responding at 10:00 o’clock at night ... It’s not difficult. I mean some people probably get annoyed with that intrusion on your personal life but to my mind, it’s only a few minutes and, you know, I might have made a difference to them getting through the semester or not and that’s my priority. That’s what I want to see happen (Lecturer, Institution L).

Valuing the importance of teacher-presence and the dedication of online teachers needs to extend beyond rhetoric and be incorporated into formal institutional expectations and guidelines, accompanied by a realistic workload model.

One of our colleagues here actually won a teaching award a couple of years ago and she, as a unit coordinator, actually does outreach to all of her students. She’ll send them personal emails and even give them a phone call every now and then and have a chat. Unfortunately, as you would be very well aware, there’s really no space in many workload models to accommodate that (Learning Support Manager, Institution P).

4. Content, Curriculum and Delivery Need to be Designed Specifically for Online Learning

“ What works in person is not the same as online... I thought it would just be more, sort of, more tailor made for it than what it is
- Online student ”

4A. DESIGNING FOR ONLINE

As described by one participant, institutions need to be:

thinking about distance learning or online learning as a different animal to the face-to-face course and it needs to be treated as such and designed completely differently for that mode of delivery (Lecturer, Institution L).

With such a diverse cohort undertaking online studies, including higher numbers of academically inexperienced students and students with disability, the interface on which content is delivered needs to be easy to navigate and as intuitive as possible.

I think for online students more than anything, it's just got to work. It can't take time; it's got to be easily navigated, it's got to talk to me quickly and it's just got to be accessible (Student Support Project Coordinator, Institution F).

It is particularly important to avoid simply uploading materials that have been designed for face-to-face students, without considering the implications for the online cohort.

We have a lot of courses that are designed for on-campus delivery and they're just replicated for the online environment and they don't tend to be as effective, but courses that explicitly designed to be delivered online tend to have a much better success rate (Equity Manager, Institution G).

Evidence (for example, Akarasriworn, Korkmaz, Ku, Luebeck, & Mayes, 2011; Devlin, 2013b; Parsell, 2014) and experience confirm that practices such as recording face-to-face lectures and uploading them for online students, rather than providing specifically designed online content, provides a disengaging experience.

If we're going to move more online, you don't just tape yourself for an hour and put it on there; that's terrible (Teaching & Learning Centre Director, Institution C).

Content used in face-to-face teaching, such as lectures, therefore needs to be re-designed if it is also to be used for online students.

On-campus we have a two-hour lecture. You cannot keep someone engaged for two hours online... so, what I look at is, what are the main concepts, and then it's a 10-minute snapshot video, so I'll modify slides and things... and I will have a 10 or 15-minute discussion on that one particular concept (Unit Coordinator, Institution H).

Similarly, uploading content as text documents that require students to scroll through dense material is no longer an acceptable online experience.

I couldn't believe how some of the tutors just thought they could just copy and paste their information guide... so that whole thing of scrolling through... the tools are there now so there should be no excuse to this scrolling business (Equity Officer, Institution Q).

At an institutional level, it is imperative to establish quality standards for online design. What is required is:

a quality agenda... making sure that programs that are online are actually specifically designed for the online student and are trying to enhance that engagement and collaboration and address those authentic sort of learning experiences that, unfortunately, through the evolution of online learning hasn't always been the case. A lot of the online learning experiences out there are basically a retro-fit of an on-campus experience which isn't necessarily the most engaging for students or most helpful in students' online learning experience (Senior Executive, Institution E).

Designing an online course that engages and connects students with their teacher, other students and the course material requires a number of considerations. Some of these include: provision of engaging activities directly related to learning outcomes; ways to encourage communication and collaboration between students; assessment tasks directly related to the content; provision of prompt feedback; and the use of technology and online tools to provide both synchronous and asynchronous activities without adding unnecessary complexity. Out of the many, many examples of interactive and engaging learning design that were provided by participants, just a few are listed below:

their blogs are visible to all the other students so they're actually able to view other people's work and comment and have a bit of a discussion around that as well so there's some engagement just inherently built into those tasks (Unit Coordinator, Institution A).

a unit that students can access at their own pace and can move forward, then go back, can check their understanding so that they've got lots of relatively bite-sized opportunities to engage, to learn, to be tested and that the learning through the unit is fairly scaffolded so we're clear what they have to do (Senior Executive, Institution P).

a really good online environment, you have models, you have clear, explicit tasks, you have ways that peers connect with each other and digitally... build a community (Teaching & Learning Manager, Institution M).

an animated video where students can look at the video for three minutes and then go and answer the questions; and the same thing was developed as a storyboard narrative (Unit Coordinator, Institution O).

it's an interactive room and so that's just purely for the students to dip in and dip out as they need, you know, just on particular areas (Unit Coordinator, Institution H).

a trickle feed of tasks... so it's step-by-step, a scaffolded start and that's very good, particularly for new students (Senior Lecturer, Institution L).

It is also essential for learning design to take into account the accessibility needs of online students with disability (DET, 2005).

If the online material, the text, has not been designed in a way that the software is capable of reading it, then we have a lot of challenges... If a student has hearing impairment and some video material used does not have captions, then we need to jump on board earlier to the session and transcribe.... The design of the unit obviously comes first here, because if the unit is designed with universal access in mind... from a very grass root level and when the teaching module is being designed... a huge bulk of your challenges are addressed (Disability Advisor, Institution P).

"Provid[ing] online materials in multiple ways" (Senior Academic, Institution H) is more likely to meet the needs of all online students, including those with disability. Implementing a system of quality standards and regular reviews at an institutional level is key to ensuring that quality design standards, including accessible design principles, are being adhered to.

The first presentation of a new subject, new course – at the end of that year, it goes through a full evaluation so it gets what's called "academic quality review" done to it and then we fix the things that are wrong with it before it goes into its second year (Senior Executive, Institution B).

Not only accessibility but also inclusivity is required, to ensure that all student cohorts can meaningfully participate.

Indigenous students... have basically said "Yes, we want Indigenous content in our courses but, more important are probably spaces; spaces in the curriculum where we can be heard and where we can hear other voices". For external students, that's particularly difficult if the learning design really focuses on content rather than interaction and spaces for connection (Team Leader, Training, Institution N).

Once institutions gain a better understanding of the diversity of their online student cohorts (see Finding 1A), research into the most appropriate online design to suit particular student groups is likely to achieve greater inclusivity. Reedy (2011) for example, outlines a design-based research project aimed at developing a more inclusive learning design framework for Charles Darwin University “which promotes the success, retention and completion of Indigenous people in higher education courses” (p. 2).

Similarly, understanding and acknowledging that a high proportion of online students are mature-age students engaged in the workforce either full- or part-time may mean that it is appropriate to design tasks, projects and assessments which are relevant to students’ workplace experience, hence providing a greater sense of inclusiveness. There is evidence that this type of applied learning design “links university study to the workplace more effectively and facilitates the development of graduate attributes” (Downing, 2015, p. vi). This is important to consider, given that within faculties such as Education, Health, IT and so on, many students are already working within these industries; also that workplace support is positively correlated with online student persistence (Park & Choi, 2009).

Additionally, there is the issue of compatibility with mobile devices. Several participants who were learning designers referred to:

‘mobile first’, which means that any interface that we develop, we develop it first for the mobile and then for the desktop version because what we’ve seen in the past 18 months is that the mobile usability is increasing and even the feedback that we get is that a lot of students are preferring to study over their mobile devices – it’s not just their phone; their iPads and other tablets as well (Learning Design Manager, Institution E).

While the use of appropriate technology is of course an essential part of good design, keeping it “as simple as possible... without making technology another hurdle that they have to get over” (Senior Lecturer, Institution O) provides fewer barriers for a greater number of students.

4B. ENGAGING AND SUPPORTING THROUGH CONTENT AND DELIVERY

To encourage more online students to stay and succeed in their studies, not only learning design but also content and the way in which content is delivered, needs to be engaging, supportive and specific to online delivery.

The Standards for Online Education developed by Parsell (2014), mentioned previously, provide a useful reference point. Parsell’s standards align closely with the findings of this project; for example, the standards specify that curriculum materials, learning activities and assessments tasks need to be “aligned, available and engaging” and provided by “a variety of media... and appropriate technologies” (Parsell, 2014, p. 21).

Providing content, learning activities and assessments in different forms allows for deeper engagement and learning across a wider cohort of students; for example, the introduction of recorded, laboratory-based vignettes in the online Bachelor of Dementia Care at the University of Tasmania (Canty et al., 2015) has been shown to improve retention and progression by engaging students more directly in the subject area.

As one participant explained:

There should be a mixture. So you have that live chat ... and then you record that so that they can view it... having your materials up-front and everything available caters for all those levels of learners... you have your learning in bite-sized chunks... you’re awakening their learning, not just about the content but of their way of working (Program Coordinator, Institution G).

Finding 3 has previously discussed the importance of student-staff interaction, and how crucial it is that this is supported and valued by the institution. Students need to be “provided with opportunities to interact with staff” including being “provided with opportunities to be active participants in learning-focused interactions” (Parsell, 2014, p. 22). Participants within this research regarded synchronous and asynchronous discussion as highly important in building learning and engagement.

During the trimester when I’m teaching, I run weekly online synchronous sessions so that they can join me in real time and speak and chat about what’s going on and then in the asynchronous discussion spaces, I think a lot of the ways that you are actually asked, the types of questions you ask to get them thinking, to get them engaging in discussion with each other – that’s another strategy. (Lecturer, Institution O).

The flexible nature of online learning means that students are engaging with learning materials at varying times. It is this flexibility of being able to fit their studies in around other life commitments, at irregular times, which attracts many students to online learning; therefore the learnings within any synchronous activities need to be comprehensively covered through asynchronous means as well; and both should be as engaging, relevant and interactive as possible (Moore & Signor, 2014; Verenikina, Jones, & Delahunty, 2017).

There were numerous examples from participants of creative ways of generating learning-centred interaction with their students through synchronous and asynchronous activities and discussions, such as:

I run a weekly Collaborate and invite whoever can attend to attend and that gets recorded... I set up as authentic an activity as I can, for example, the topic for one week was cultural diversity and so for the whole Collaborate, we used Group Map... everyone had access to an online group brainstorming tool and we brainstormed using the Six Hat methodology... (Unit Coordinator, Institution G).

Allowing opportunities for students to engage with the content online. It could be as simple as putting a little quiz after a video so “Watch this video, do this quiz. How did you go? Oh, not so well? Do it again”. So opportunities for self-assessment as well, and feedback... teacher presence in the blogs and discussion boards, you know, responding to questions and comments... (Online Curriculum Manager, Institution D).

One academic talked about student feedback from a graduation ceremony with online students, where:

one student commented, that “the only thing that kept me going and the main reason why I am here tonight, was the weekly ‘Collaborate’ sessions” (Program Convenor, Institution G).

Findings from this research also indicate the importance of providing students “with timely, improvement focused formative feedback” (Parsell, 2014, p.21).

We need to be able to make sure our academics are up with the right feedback... in a timely manner and... be able to know what to say to students, just to either keep them motivated or to give them the right amount of motivation to keep going (Teaching & Learning Director, Institution C).

They need someone to talk to and they need feedback – good feedback, constructive feedback, timely feedback – from academics (Student Support Manager, Institution G).

4C. STRENGTHENING INTERACTION AMONGST STUDENTS

Providing students “with opportunities to interact with peers” through “learning focused interaction” (Parsell, 2014, p.21) is also necessary for the ongoing engagement and participation of online students.

The discussion is the centrepiece of the classroom experience... they click into the site, they land straight in the discussion board and it helps them to imagine it as a virtual space... each of the activities involves something that they need to reflect on, like an anchor that they need to reflect on all week. Then they need to post something and then they need to respond to someone else. I offer an element of choice which links to their diverse backgrounds as well. So that way, everyone learns from being part of that discussion that they wouldn't otherwise have (Course Convenor, Institution H).

Generating opportunities for students to interact with online peers both formally and informally undoubtedly requires creativity; participants cited numerous ways in which this could be done, such as collaborative exercises and assessment activities, and utilising online tools to generate interactions.

You can replicate peer support in an online environment as you know, and you can create really very engaging environments for online students. (Senior Executive, Teaching & Learning, Institution P).

Using the potential of the online environment to build collaboration and sharing amongst students “has the potential to foster engagement and active learning beyond subject matter that can be rich and rewarding not only for the students but for the educators as well” (Signor & Moore, 2014, p. 312).

One of the potential barriers to fostering interaction can be class sizes which, if too large, can make it difficult, if not impossible, for online teachers to facilitate meaningful communication amongst the class as a whole. As described by one participant “classes with 300 students with one single lecturer... it does not work” (Student Retention Project Manager, Institution N). In contrast, at an institution where online class sizes were kept to no more than 30, the experience was quite different. “Having those small tutorial groups helps because they create a little community” (Senior Executive, Institution B). Consultation with academic staff to set class sizes to realistic figures is essential to enable the online teacher not only to have sufficient interaction between teacher and student but also to build positive interaction between students.

Where this positive facilitation of student-to-student interaction occurs within the formal learning setting, participants reported that students are likely to use informal online peer networks more constructively.

Alongside the online learning that we do in the formal space, most class groups will set up a Facebook page that doesn't include a lecturer; it's a private group and that's where they do all their “What about this and how do you know that and here's my screen grab” and occasionally they'll show it to you and say “Oh, we were talking about this on the Facebook page. Any ideas” and they'll send you a grab and you can send them an email back (Program Manager, Institution M).

Hence, social media outside of the classroom, “where they can engage with their peers.... maintain the sense of community” (Unit Coordinator, Institution M) can be a powerful and positive adjunct to the connections established in class.

You know, lots of academics get concerned that students set up Facebook pages alongside a unit and they don't like that and they tell students to take it down or make them have access to

it which is just a nonsense because, back in my day at university... students would go to the tavern at lunch time and you talk about the class and the academic and that and no-one was there to say “I’m sorry you can’t say that” and Facebook really is just a way of learning in that regard, replacement of that socialisation (Program Coordinator, Institution G).

5. Contact and Connect Along the Student Journey

“ I guess the lows for me is just, I guess not having that relationship with people I guess, not having that – I’m sure, I know that the lecturers are lovely and they’re very helpful and all that but I guess it would be nice for them to more connect with us students
- Online student ”

Across the wider institution, the establishment of regular contact points between students and the institution, via both academic and professional staff, that reach out to students to offer support and maintain engagement, have a demonstrated impact on retention and academic success of online students.

5A. REACHING OUT PROACTIVELY

Effective communication with students is a two-way process, not only making it easier for students to reach out to the institution but also making sure that the institution reaches out to students, at points in their journey where they are most likely to need support.

We liaise with students at every point really of their studies. They can come to us so we’ll respond to their concerns and their needs and we do proactive work as well – we reach out to students and select them when we think they may be sort of falling by the wayside, having some difficulties (Student Services Senior Manager, Institution B).

Different strategies can be implemented to reach out to students – one example being the employment of more senior students who are trained to assist new students and provide them with, or refer them to, the appropriate support.

Students that are current students – they’re high performers at the university, they’re paid employees of the universities and they do calling campaigns to other students along the lines of their welcome – so we welcome them to the university and then we call them where we think there are high times of withdrawal so leading into after their first assignment, their first fail – they haven’t checked the subject outline; those sorts of things (Student Services Senior Manager, Institution F).

Student-to-student support can be expanded into formal peer mentoring programs, described by one participant as:

online students assisting other students, whether it be some assistance with “I’m new to online study. How do I go about this?” Or, if they’re struggling in a particular area, keeping up with course work and balancing work and study, things like that, just providing that support to other students and helping them through (Careers Service Manager, Institution H).

Once again, collaboration between academics and support services is required to ensure a strategic and consistent approach to developing, planning and implementing a student contact and intervention framework.

All the students are assigned an academic support officer and as soon as they [students] don't access [the LMS], after about the first week we'll follow them up. There's a flag for them and if they don't submit the first assessment, there's the second flag and they are followed up... the academic support officers are the ones who actually follow them up (Enabling Programs Manager, Institution G).

At campuses where staff have responsibility for intervention strategies for both on-campus and online distance students, it was stressed by some participants that the distance students should receive high priority, due to their more isolated situation.

We've made distance students our priority in nearly everything we've done. We've initiated a welcome call which is done by students, so it's a student-to-student communication (Student Engagement Manager, Institution Q).

Many online teachers understand well the importance of reaching out to students, and can be extremely proactive about contacting them at high-risk points to help them keep on track.

Don't wait for them to approach you. If they get to the first written assignment, anyone that hasn't put it in who is still present in the course – hasn't withdrawn – I contact them as well and just say "How's it going? Is there a problem?" (Lecturer, Institution K).

Amongst the interviews there was anecdotal evidence from lecturers about the effectiveness of this type of personal contact on student retention and pass rates;

I've been able to get my non-completer range right down to, I think it's... well, the unit I've just finished, it's down to four per cent... so it's really low and I've been able to get my fail rate down to one per cent (Course Coordinator, Institution H);

also that it was valued by the students.

It shows an interest in them... because students aren't used to getting an email from an instructor (Lecturer, Institution O).

5B. BUILDING AN INSTITUTIONAL FRAMEWORK FOR STUDENT INTERVENTIONS

However, where this type of contact relies solely on the commitment of individual lecturers or heads of departments, without an institutional framework or workload model to support this it will be patchy at best, with many lecturers lacking the time to do this despite its value.

We've got a concerted campaign thing they want us to do; they want us ringing up students who haven't logged on within the first two weeks... the chair of our department reckons he can bring back 20 to 30 per cent of people who aren't engaged, with a phone call. It becomes a time issue... (Program Coordinator, Institution H).

Given the time-consuming nature of developing and maintaining teacher-presence (see Finding 3) it is perhaps an unrealistic expectation that teachers will also be able to regularly contact those online students who are disengaging from study, without further support to do this. Centralised, formalised processes to follow up students who are not active in the online classroom, or appear to be at risk in other ways, can make sure this happens.

With numbers growing so large, it's very difficult for academic staff to deal with the sheer volume, particularly with distance students or online students – if they don't respond or if you

call them up and you get an answering machine and they don't return your call, you call again, it can be very difficult to actually contact some of these people. So, we have been talking about actually creating positions which would at critical points throughout the semester, their sole job would be to make contact with students who appear to be kind of at risk of not completing their programs (Senior Manager, Institution J).

One example of a comprehensive institutional framework of interventions for online learners, is that of the OU's "Model for Integrated Learning and Learner Support" (Slade & Prinsloo, 2015) known as the MILLS framework, where the use of learning analytics (discussed further in Finding 6) informs a series of targeted and personalised contacts with students. This framework was mentioned frequently and positively by OU participants, with comments such as "it's actually building in people person-to-person support, right at the beginning" and "it allows us to selectively message students or make other interventions like telephone interventions".

At other institutions, where there were examples of centrally implemented strategies with a dedicated team responsible for implementation, participants reported a more consistent approach across all students, leading to improvements in student satisfaction.

The Student Advisors... run campaigns specifically where we outreach to external students twice during the semester; one of those outreaches is prior to census date. The outreach begins at around about Week 2 of semester and will carry through to Week 4, depending on how long it takes us to get to those students. We also run a second campaign to those external students at around about Week 11, so just before the work up to exams and that external contact manifests as a phone call to the external student and any follow up we need to do, so follow up email, follow up appointments, follow up phone calls. We find that our external students love it and they're quite rewarding, fruitful conversations we have (Student Advisor, Institution P).

The type of regular outreach contact appeared to play an important role in encouraging help-seeking behaviour in students, which is so important for student retention (Bostwick, 2014; Devlin et al., 2012; Dickmeyer & Zhu, 2013). Having regular telephone calls coming to them made it easier for students to know who to contact and to feel confident about getting in touch when they need to.

They will call, they will email, whatever they need to do, so we become a really important conduit for them...they also are really appreciative that somebody's actually outreaching for that (Student Advisor, Institution P).

We find that if people later on want to contact the university and they don't know where to go or they're having trouble, they'll come back to us because of that connection that we made (Student Engagement Coordinator, Institution Q).

Providing new online students with a specific contact person who is 'theirs' to communicate with and who reaches out to them as one person to another, at regular points on their study journey, can also reduce confusion over who to contact and help to build a sense of real connection between the university and the student.

Someone... actually connected with you through your whole life journey... when they log into the system, that person's name is there, any communications they get have their photograph, have their name, that sort of thing... it's a relationship. We don't send a "Dear student" email; we send a "Dear Jason" email. We work very hard to know who you are, where you are in your journey, what part of the process you're in, we work hard on the outreach stuff (Senior Manager, Institution J).

Apart from the student retention benefits, contacting students prior to census date is important from an ethical perspective. Not all students are fully aware of the implications of the need to withdraw prior to census date, and the pressure of other responsibilities such as work and family can take precedence over remembering the census date and what this means.

On campus... it's going to be clearer and their tutors and their fellow students are going to say "census date" [but online students] are left on their own in some ways...they're at home and their studies can easily fade into the background if family circumstances happen or work/life gets a bit too busy. The online degree can just sort of get forgotten about... and then census date passes (Student Equity Officer, Institution E).

Hence, there is a responsibility for institutions to ensure that online students who are not engaging with their studies are given every opportunity either to re-engage or to withdraw prior to incurring a financial debt. Clear processes to ensure contact at these times is therefore required.

Each time we are taking money off somebody, we have a look to see if there's any sign of them actually studying and if there's no sign of them studying, we send them a note, an email, that says "Mm hmm, you're still up and at it aren't you? Let us know if you're not" and then either we try and rescue them or we try and withdraw them so they don't owe... unnecessary money (Student Support Manager, Institution B).

Having an institutional framework for interventions allows for messaging about particular services at the most appropriate times and in different ways, making it easier for online students to access support and advice when they most need it.

We have a communication strategy that's at four touch points along the first semester to just remind people but also to link off to other support systems. There's certain times when first assessments might be due and, you know, we would direct them off to the Learning Centre if they needed some support with those sorts of things and then, when they get into exam preparation, we would link off to time management or stress management, those sorts of things (Senior Manager, Institution J).

An intervention framework needs to explore the most effective technologies for contacting students, and, given the diversity of the cohort, to plan for the use of different types of technologies to reach as many students as possible.

I really would like to try [text messaging] because I know students have always got their mobile phone; I don't think they would mind a friendly, welcoming SMS (Program Coordinator, Institution M).

There are many examples in the literature on online student support that demonstrate the positive impact of interventions at key points in the student journey – "messaging, messaging is really important and time of the messages are important, especially when it comes to retention" (Learning Analytics Manager, Institution E). Examples include the New Zealand research by Nichols (2010) showing that when "ad hoc" academic support was replaced with a more formalised academic support process in which "a series of strategic interventions" (p. 94) were implemented, "first-time student course completion rose by 24.7 points across a single semester" (p.107).

Hand in hand with planning and implementing a framework for student contact and interventions, goes the need to ensure these interventions are appropriately targeted. Finding 6 outlines the importance of developing a learning analytics strategy, to inform decisions about which, when and how such contact and interventions should be offered.

6. Learning Analytics Have a Key Role in Informing Appropriate and Effective Student Interventions

“It’s nice to hear another human being’s voice... just to let you know how you’re going, and you just think “Wow, how did you know today was the day that I really needed to have someone check in...?”
- Online student

6A. DEVELOPING A LEARNING ANALYTICS STRATEGY

Online study creates opportunities for institutions to make constructive use of the wealth of data available to them from their internal online systems to enhance the student experience and student outcomes. Making the best use of this data to support online students most effectively needs to be recognised as an essential part of any online education strategy.

It’s not the data itself; it’s what staff do with the data, and staff being able to think and be able to put into place simple, quick interventions that may help students. There’s so much data there, we’re not collecting it in an accessible form for lecturers to take appropriate actions as yet (Evaluation Officer, Institution J).

Once again, a whole-of-institution approach is required, to bring in all necessary expertise, to avoid duplication and confusion and to enable access to the necessary data for all staff involved.

There’s such a broad range of skill sets that you need to bring into it that I can’t see how anybody would think that any one area could do that by themselves (Team Leader, Training, Institution N).

Consistent with the findings of West et al. (2016) this research revealed that many staff are very interested in using learning analytics data in a range of ways, to inform interventions with students. Without a central process however and easy access to the data required, this can be problematic.

At the moment, we have a very manual process and what we are hoping for is something that’s much more automated that does use real time learning analytics and ideally, we want to be able, every day, to identify the top 100 at-risk students without having to do all the grunt work beneath. So, at the moment, it’s very manual. It involves Excel spreadsheets, taking attendance in tutorials, so it’s not an easy system and it’s probably something that’s very difficult to scale-up but we’re hoping that once we get the right systems, we can get much more of a systematic approach (Senior Academic, Institution M).

Development of a learning analytics strategy includes decision-making about what questions should be asked of the data.

The question remains in my mind as to exactly what we’re going to use it for, but there’s going to be an awful lot of data that we can look at... We’ve got to ask the right questions (Senior Academic, Institution H).

These questions might be about demographic data, particularly for targeting support towards specific cohorts such as government-identified equity groups, while other questions might be about student behaviour and activity. Answers to these questions will inform interventions.

Engagement tells a lot more than demographics and that’s why we are pushing really hard around learning analytics within the learning environments versus just demographic information

because yes, that gives you some fundamental information but... it's much better to see real-time engagement which is the current picture (Learning Analytics Manager, Institution E).

The OU is an example of a university that “is investing heavily in a strategic learning analytics programme to enhance student success by embedding evidence based decision making at all levels” (Sclater et al., 2016, p. 34) while the Early Alert program at the University of New England (Leece, 2015) “uses multiple data sources to highlight students who may be at risk of attrition” (Nelson & Creagh, 2012, p. 85), with interventions targeted towards these students.

6B. PREDICTIVE MODELLING

Data from online systems can be used to inform not only interventions based on what students are doing or not doing right now, but also interventions based on what they may do in the future.

Right now, we're down to the classroom micro level and activity based and we want to get more granular, we want to get into the understanding of... the essence of students and then start pulling in demographics to be able to say “Ah, we can start to see patterns” (Head of Learning Technology, Institution E).

Learning analytics provide “a retrospective view in relation to correlations between student types and student success” (Senior Executive, Institution B), and therefore can have a powerful role in building predictive models to help institutions target support towards those most likely to need it.

We mapped... behaviours... against data that we held in the data warehouse... about 34 triggers, and we push all of student data through that every night during the teaching period. That gives us a ‘score’, for want of a better word, for every student and then we take about 200 students a day and contact them (Head of Student Support, Institution O).

The combination of data on current students' behaviour, combined with historical data on the behaviours of previous student cohorts, when methodically collected and analysed, informs the institution about who is most likely to be at-risk, and where to target resources most effectively to support, engage and retain a greater number of online students.

By analysing the behavioural patterns of previous cohorts of students and applying that to the current cohort, even before a student disengages completely – that's a clear sign, or that they haven't touched the website, they haven't submitted an assignment, they haven't responded to an email for the last four weeks – well there's a clear indicator there. What we hope is that predictive indicators get us into “Actually we think this student isn't going to submit their next assignment based on their behavioural patterns” (Head of Analytics, Institution B).

This provides powerful information to inform student retention campaigns, through:

bringing the data together and, based on predictive models that are built from historical students, predicting what each student's risk of leaving between the time of that campaign and the following census date... It's using all student data to form that predictive model (Data Scientist, Institution C).

6C. PERSONALISING THE LEARNING EXPERIENCE

Information gained from student data can be used to personalise interactions between the institution and students.

I think where students are at now, if we look at them as a customer base, they expect to be remembered. That's what our personalisation of apps and feedback does; we get instant personalisation and gratification with our personal life and we need to start understanding how we can do that... and analytics and other tools help academics and teachers keep up with that (Head of Learning Technology, Institution E).

Strategic use of data also makes it possible to personalise the learning experience itself. This may be as simple as pointing particular students in the direction of extra resources, or allowing them to work through them at their own pace over a set time frame, instead of strictly week by week, with data informing teachers about their individual needs and progress. Such an approach can potentially “empower students by enabling them to plan and organise their studies to fit in with their schedules and competing demands” (Devlin & McKay, 2016, p. 99). A more personalised curriculum can be provided, in the form of extra activities and practice being offered automatically through the learning platform, to those who are struggling with a concept or topic.

Making the connection across data sources to point a student in the right direction, or a direction where everyone else is headed... if you don't get something, there's another way around it until you do get it, and you can go to... whatever's next in line in the curriculum. There's so many things that can help modify the student so they don't feel like “Okay, I don't get it” (Data Scientist, Institution C).

Undoubtedly there is a great deal more than has been covered here that can be achieved through effective use of student data. Putting resources, energy and skills into the development of a comprehensive learning analytics strategy enables institutions to use the vast amount of data that is being collected, in ways that will support more online students to fully participate in their studies, remain in their courses and ultimately achieve their learning goals.

7. Collaboration is Required to Integrate and Embed Support; Delivering it to Students at Point of Need

They came back to us and said you have all got a problem with referencing, you all need to redo your referencing for the next assessment which was another essay. They gave us no tutorial or anything...
- Online student

Interview data strongly indicated that collaboration across the different academic and professional areas of the institution leads to support being more easily available, when and where it is most needed.

7A. EMBEDDING SUPPORT WITHIN CURRICULUM

Participants spoke of many examples where academic and professional staff were working together across different areas to develop appropriate online resources that could be delivered to students at the most appropriate points in the curriculum.

If their referencing is not great or they're not finding scholarly academic quality material, okay, we'll get one of my team in... we'll create some sort of online resource to embed [in the curriculum] (Manager, Library Services, Institution G).

putting the material in that is relevant for the student at that point in time so that they hopefully don't have to go searching all around the universe and get lost (Online Curriculum Manager, Institution D).

Learning support is an area that is especially important for online students, who need to be “provided with appropriate learning support”, including “a range of appropriate, up-to-date and reliable learning skills workshops” (Parsell, 2014, p. 22).

Embedding academic skills practice within course content delivers this to online students, instead of expecting time-poor and inexperienced students to seek it out themselves.

We talk to lecturers and academic designers as much as possible to try and get content around basic academic skills into all of the courses... we've had more success with exercises being built into the courses that students are doing (Library Service Director, Institution N).

A high proportion of new online students have not studied formally for many years, nor been exposed to the academic expectations of higher education. Therefore the need for academic preparation can be acute. As discussed in Finding 2, many students will not have undertaken access, enabling or preparatory courses prior to starting.

We try to counsel them that they might be better off starting in access but if they choose the other, they choose the other (Senior Executive, Institution B).

Embedding academic preparation and support in first year online units and courses is the most effective way of reaching all new students. This project revealed a number of examples of proactive staff members developing this type of embedded support within course content.

Next year, in one of the first year subjects – and I will be coordinating that – we're actually going to teach the students how to learn online, which is more explicit and more deliberate in their approach as to what's expected for students. Often we just assume that they go and do whatever, but we actually are going to have a go at teaching them to learn online and what's appropriate responses and that sort of thing – so a more structured, more scaffolded approach (Senior Academic, Institution L).

However, a broader strategic approach ensures that all beginning units adequately prepare new students for the rigours of online academic study.

So all our level one programs, basically the first two months of that is about learning how to learn and so, rather than it's over here, outside of the discipline base, it's actually embedded (Teaching & Learning Senior Manager, Institution B).

Through this approach, academic literacies can be:

integrated within the classroom task, and usually within the assessment task because that's such a key point of learning and students are highly motivated to listen to how to do their assessment... so some basic principles of... unpacking the discourse, using models, making what's implicit explicit (Language & Learning Support Manager, Institution M).

7B. STEPPING OUT OF TRADITIONAL BOUNDARIES TO DELIVER A HOLISTIC STUDENT EXPERIENCE

Bringing together academic and student support staff on specific projects, or preferably in ongoing teams, to collaborate on meeting students' needs, provides “joined up academic and non-academic support for students in a kind of holistic way” (Senior Executive, Institution B). This requires a change in ways of thinking for many institutions where traditionally professional and academic areas have tended to operate quite separately from each other. In many cases, amongst the participating

universities in this research, collaboration happened where an individual staff member behaved proactively to generate a new type of teamwork.

Gradually what we've done is worked through the units and through the coordinators to talk to them about the wealth of online resources, and we've made videos, we have lib guides for [online] students and things like that... so that the students can succeed without causing the extra stress of needing to contact the library, "Can you post me this", you know, that sort of thing... It embeds that sort of thinking, and the lib guides within the [LMS] units for the online students so that they can go off to a lib guide that's specially created for them (Digital Services Director, Institution G).

Without clear institutional support for this however, it is time-consuming and challenging to make this happen and relies on the goodwill of those involved to build relationships over time.

The tactic I've had to take is "Do something with some, show impact, get others interested, then they'll kind of join in". It's also been a lot of one-to-one, chipping away at relationships. That's what's really made it, is the relationships (Student Support Manager, Institution Q).

In some cases, it appeared that a significant institutional shift towards breaking down traditional boundaries was taking place, which was viewed positively by the staff involved.

We've just distributed learning support across the faculty... it's still bedding in but the anecdotal evidence is that some colleagues within departments and faculties are quite happy that the support is more accessible, they feel like it's closer (Senior Executive, Institution K).

The university took the decision to reorganise its generic support on curriculum lines, on faculty lines some years ago... and they now sort of work on dedicated curriculum areas so they have much closer links with teaching staff... It's working in the right direction (Lecturer, Institution B).

There were also examples on a smaller scale, within particular areas of universities, where for example, professional staff were allocated to work with faculties or schools at the central administration level to collaborate more effectively on supporting students.

We have at least one Student Advisor in every School... the network functions across the whole university. We're part of the School but we're also part of a network... centrally... so we have an understanding, I think generally of how the university functions and we... get a sense of what's working and what isn't (Student Advisor Coordinator, Institution P).

Another example was that of close consultation and collaboration between IT experts and academics to embed technology support within unit or course content. Many participants emphasised the need for students to be "supported in their use of educational technology" (Parsell, 2014, p.22).

They need assistance in being able to navigate what to do in a unit, where you find information, what all this material's about, discussion forums, submitting assignments – just all of that, especially in the first little while, I think is totally overwhelming for many (Deputy Head of School, Institution Q).

Provision of IT support was seen as crucial.

The IT Service Desk... is really helpful – that way the students can call if they've got a problem – they can remotely access the student's computer so it's great for distance students because even though they're not here, they can go in and diagnose a problem (Learning Designer, Institution O).

However, in some cases this extended further, to an embedded approach, planned and implemented through team collaboration.

That team approach was far better – they [IT expert] really sat as a team member, as the discipline expert. Then that got us... the “roadmap” of learning so the students would go into the [LMS] site, open that modular – it was all in one complete form and all interactive connections (Program Coordinator, Institution G).

The many positive comments from participants about their experiences of being involved in teamwork outside of their usual areas of work to develop or improve support for students indicated a high level of support for a more collaborative institutional environment.

7C. ENSURING ACCESS TO SUPPORT SERVICES FOR ALL STUDENTS

Currently, online students do not necessarily have equivalent access to the full suite of integrated support services that are provided for on-campus students. The provision of support services to online students varied greatly across the participating universities. Where online students were in the majority and/or a ‘core business’ approach was taken by the university towards most if not all aspects of online education, support services were more likely to be available and accessible for online students.

You can do it [counselling] face-to-face using Skype. Yeah and same as student learning appointments and advisor appointments – that can be over the phone or on Skype as well. You can talk to a disability advisor – anyone really – you can do that all on the phone if you need to (Student Support Coordinator, Institution L).

However, this was not always the case.

It’s been focused on the face-to-face students and there hasn’t really been anything put in place for the online students (Learning Designer, Institution C).

Services were not always available at the times when online students were likely to need them.

There’s not a lot of support out of hours for online students from the university, you know, most things are 9:00 to 5:00 still (Enabling Programs Manager, Institution G).

Participants indicated that a range of ways to communicate needs to be utilised to ensure that all services available to on-campus students are also readily available to online students. These can include telephone calls, Skype calls, emails, messaging, live chat and other technologies that allow both synchronous and asynchronous contact between students and student support services. Using a variety of media allows the students to choose which means of communication they are most comfortable with and reduces barriers to making contact. In the words of one participant, “we need to be making sure that we have a kind of online version of what we have on-campus” (Equity Officer, Institution G).

However, this was also seen a quite a challenge to address.

How do you actually provide a range of services that are online first but then are well-integrated and articulated back into the next level of support and the next level? How you provide all of that stuff online so that there’s a great client experience all the way through... is something that everyone’s grappling with (Library Services Director, Institution N).

Again, collaboration between academic and support areas was viewed as an important part of the solution.

We're trying to work out how we can have – not a 24/7 support – but a lot better, or to even design the curriculum so that you don't need a lot of support on a Sunday afternoon or at midnight (Teaching & Learning Director, Institution C).

Conclusion

The expansion of online learning in the higher education sector is making university access more possible than ever before, including for students who have not previously considered this an option. These students are attracted to online study for many reasons, such as the hope that the relative flexibility of online education will enable them to fit in their studies around families and jobs, and the financial benefits of being able to continue to work, earn money, and not incur extra travel and accommodation costs. It also offers an alternative where there are other barriers to physical attendance, such as disability, geography and incarceration. These are all powerful factors in encouraging students who may not otherwise have envisaged university as an option for them, to enrol as online students in a university program of study.

Unfortunately, to borrow a well-worn but apt quote, “access without support is not opportunity” (Tinto, 2008) and this is indeed reflected in the higher attrition rates and lower degree completion rates for online students when compared with those in on-campus higher education. Those involved in the teaching and support of online students know from experience the types of strategies and interventions that can make a positive difference, encouraging students to stay and succeed. Their experience is supported by considerable research evidence. The findings from this research are based directly upon this experience and evidence, which demonstrates that universities offering online education need to do so in a thoughtful, strategic way, not treating it as an ‘add-on’ to the on-campus experience, but as central to the core business of the institution. Whole-of-institution strategies need to be established, continuously evaluated and improved upon in all relevant areas such as: marketing and prospective student advice; student preparation and induction; teaching; student support; curriculum; learning design; staff development; technology; data collection; data dissemination; and learning analytics.

As discussed in the introduction to this report, the findings from this research have informed the development of a set of evidence-based *National Guidelines* – a key outcome from this research – to provide more specific advice and recommendations to institutions. These guidelines outline practical means by which institutions can provide online students with a more engaging and supportive learning experience, hence making it possible for many more to stay, participate and achieve their learning goals. The focus of these guidelines is on improving student outcomes in online undergraduate programs and in online pathways/enabling programs. However, they may also have relevance and applicability for other areas within post-secondary education. One of these is the area of online postgraduate studies where, in any given cohort, there are likely to be a certain number of students who have gained entry to their degree via recognition of prior learning, through previous vocational level studies and/or work-based training and experience.

People come in to postgrad normally having done some undergraduate degree... but there is a significant minority that have not previously completed undergrad study. Many haven't even done any undergrad at all; they don't have any undergrad experience at all. So, coming to uni in postgrad is their first experience of university. You've got a chunk of your students who haven't done it before. I was really surprised to learn this (Academic, Institution D).

As this academic points out, such postgraduate students are entering university without “familiarity with academic practices” or an understanding of “academic literacy”.

These guidelines may also be useful within the VET sector, where similarly there are likely to be many students entering with little prior experience of formal online study. Hence, these guidelines, while developed from research centred on undergraduate and enabling online education may be regarded as applicable to the post-secondary online education sector more broadly.

References

- Abbott-Chapman, J. (2011). Making the most of the mosaic: Facilitating post-school transitions to higher education of disadvantaged students. *The Australian Educational Researcher*, 38(1), 57-71.
- Akarasriworn, C., Korkmaz, O., Ku, H., Luebeck, J., & Mayes, R. (2011). Themes and strategies for transformative online instruction: a review of literature and practice. *Quarterly Review of Distance Education*, 12(3), 151+.
- Anderson, T. (2009). The Dance of Technology and Pedagogy in Self-Paced Distance Education. Retrieved from <http://hdl.handle.net/2149/2210>
- Anderson, T., & Dron, J. (2011). Three Generations of Distance Education Pedagogy. *International Review of Research in Open and Distance Learning*, 12(3), 80-97.
- Avella, J. T., Kebritchi, M., Nunn, S. G., & Kanai, T. (2016). Learning Analytics Methods, Benefits, and Challenges in Higher Education: A Systematic Literature Review. *Online Learning*, 20(2).
- Behrendt, L., Larkin, S., Griew, R., & Kelly, P. (2012). *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People: Final Report*. Australian Government.
- Bostwick, R. (2014). *University Support Systems, Help-Seeking Behaviour and the Management of Student Psychological Distress*. (Doctor of Philosophy), Edith Cowan University. Retrieved from <http://ro.ecu.edu.au/theses/1458>
- Boton, E. C., & Gregory, S. (2015). Minimizing Attrition in Online Degree Courses. *Journal of Technology and Human Interaction*, 5(4), 37-61.
- Brown, M. (2012). Learning analytics: Moving from concept to practice. *EDUCAUSE Learning Initiative*. Retrieved from <http://net.educause.edu/ir/library/pdf/ELIB1203.pdf>
- Burke, P. J., & Crozier, G. (2014). Higher education pedagogies: Gendered formations, mis/recognition and emotion. *Journal of Research in Gender Studies*, 4(2), 52-67.
- Canty, A. J., Goldberg, L. R., Ziebell, J. M., & Ceperkovic, H. (2015). *Meeting the Challenge of designing and delivering an entry level unit of study to engage and inspire learners in online neuroscience education in a Bachelor of Dementia Care*. Paper presented at the ICERI Proceedings, 18-20 November, Seville, Spain.
- Cardak, B., Brett, M., Bowden, M., Vecci, J., Barry, P., Bahtsevanoglou, J., & McAllister, R. (2017). *Regional Student Participation and Migration: Analysis of factors influencing regional student participation and internal migration in Australian higher education*. Retrieved from <https://www.ncsehe.edu.au/wp-content/uploads/2017/02/Regional-Student-Participation-and-Migration-20170227-Final.pdf>
- Charles Darwin University. (2015). *Let students know you're there: Designing online for maximising teacher presence*. Higher Education Faculties and the Office of Learning and Teaching. Retrieved from <https://cdu.edu.au/olt/ltresources/downloads/Teacher%20Presence%20PresentationMay2015%20PDF.pdf>
- Charles Darwin University. (2017). *6 Principles of Online Teaching*. Retrieved from <https://cdu.edu.au/olt/teaching/6keyprinciples.html>
- Charles Sturt University. (2017). *Outreach Team*. Retrieved from <https://www.csu.edu.au/office-for-students/our-teams/engagement/outreach-team>
- Chawinga, W. D., & Andrew, Z. P. (2016). Increasing Access to Higher Education Through Open and Distance Learning: Empirical Findings From Mzuzu University, Malawi. *International Review of Research in Open and Distributed Learning*, 17(4), 1-20.
- Curtin University. (2017). *UniReady*. Retrieved from <http://futurestudents.curtin.edu.au/undergraduate/entry/flexible/uniready/>
- de Freitas, S., Earp, J., Ott, M., Killic, K., Neyd, M., Popescue, M., Romerof, M., Usartf, M. & Stanescue, I. (2012). Hot Issues in Game Enhanced Learning: the GEL Viewpoint. *Procedia Computer Science*, 15(2012), 25-31.

- de Freitas, S., Rebolledo-Mendez, G., Liarokapis, F., Magoulas, G., & Poulouvassilis, A. (2010). Learning as immersive experiences: Using the four-dimensional framework for designing and evaluating immersive learning experiences in a virtual world. *British Journal of Educational Technology*, 41(1), 69-85.
- Delahunty, J., Verenikina, I., & Jones, P. (2014). Socio-emotional connections: identity, belonging and learning in online interactions. A literature review. *Technology, Pedagogy and Education*, 23, 243-265.
- DET. (2005). *Disability Standards for Education 2005*. Retrieved from <https://www.education.gov.au/disability-standards-education-2005>
- DET. (2016a). *2015 Appendix 1 - Open Universities Australia*. Retrieved from <https://docs.education.gov.au/documents/2015-appendix-1-open-universities-australia>: <https://docs.education.gov.au/documents/2015-appendix-1-open-universities-australia>
- DET. (2016b). *Domestic OUA student by equity group 2011-2015*. Internal report.
- DET. (2017). *Completion Rates of Higher Education Students- Cohort Analysis, 2005-2014*. Retrieved from <https://docs.education.gov.au/documents/completion-rates-higher-education-students-cohort-analysis-2005-2014>.
- Devlin, M. (2013a). Bridging socio-cultural incongruity: conceptualising the success of students from low socio-economic status backgrounds in Australian higher education. *Studies in Higher Education*, 38(6), 939-949.
- Devlin, M. (2013b). *eLearning Vision*. Retrieved from http://federation.edu.au/__data/assets/pdf_file/0020/159122/FedUni_eVision2014.pdf
- Devlin, M., Kift, S., Nelson, K., Smith, L., & McKay, J. (2012). *Effective teaching and support of students from low socioeconomic backgrounds: Resources for Australian higher education*. Retrieved from <http://www.lowses.edu.au/assets/ALTC%20LSES%20Final%20Report%202012.pdf>
- Devlin, M., & McKay, J. (2016). Teaching students using technology: Facilitating success for students from low socioeconomic status backgrounds in Australian universities. *Australasian Journal of Educational Technology*, 32(1), 92-106.
- Dickmeyer, N., & Zhu, C. (2013). *Help-Seeking Behavior and Predictions of Retention*. LaGuardia Community College. Retrieved from <https://www.laguardia.edu/WorkArea/DownloadAsset.aspx?id=21474855879>
- Dietz-Uhler, B., & Hurn, J. E. (2013). Using Learning Analytics to Predict (and Improve) Student Success: A Faculty Perspective. *Journal of Interactive Online Learning*, 12(1), 17-26.
- Downing, J. (2015). *Applied learning design in an online teacher-education course*. (PhD), Murdoch University. Retrieved from <http://researchrepository.murdoch.edu.au/id/eprint/30925/>
- Field, R., & Kent, B. (2006). *Engaging First Year Students with an Effective Learning Environment: Combining Laurillard's Conversational Framework and Active Learning with Blended Delivery*. Paper presented at the 9th Pacific Rim First Year In Higher Education Conference : Engaging Students, 12-14 July 2006 Gold Coast, Qld.
- Gouthro, P. (2006). A critical feminist analysis of the homeplace as learning site: expanding the discourse of lifelong learning to consider adult women learners. *International Journal of Lifelong Education*, 24(1), 5-19.
- Gravel, C. A. (2012). Student-Advisor Interaction in Undergraduate Online Degree Programs: A Factor in Student Retention. *NACADA*, 32(2), 56-67.
- Greenland, S. J., & Moore, C. (2014). Patterns of Student Enrolment and Attrition in Australian Open Access Online Education: A Preliminary Case Study. *Open Praxis*, 6(1), 45-54.
- Henry, M., Pooley, J. A., & Omari, M. (2014). *Student motivations for studying online: A qualitative study*. Paper presented at the Proceedings of the 23rd Annual Teaching and Learning Forum 2014, Perth, The University of Western Australia. Retrieved from http://ctl.curtin.edu.au/professional_development/conferences/tlf/tlf2014/refereed/henry.pdf

- Herrmannova, D., Hlosta, M., Kuzilek, J., & Zdrahal, Z. (2015). *Evaluating Weekly Predictions of At-Risk Students at The Open University: Results and Issues*. Paper presented at the EDEN 2015 Annual Conference, 9-12 June 2015, Barcelona, Spain. Retrieved from http://www.eden-online.org/2015_barcelona.html
- Heyman, E. (2010). Overcoming Student Retention Issues in Higher Education Online. *Online Journal of Distance Learning Administration*, 13(4).
- Hinton-Smith, T. (2009). Lone parents as HE students: a qualitative email study. In B. Merrill (Ed.), *Learning to Change? The role of identity and learning careers in adult education*. Oxford: Peter Lang.
- Hook, G. (2015). Recognition and accountability: sole parent postgraduates in university conditions. *Gender and Education*, 27(2), 114-130.
- Hughes, G. (2007). Diversity, identity and belonging in e-learning communities: some theories and paradoxes. *Teaching in Higher Education*, 12(5-6), 709-720.
- Ilgaz, H., & Gülbahar, Y. (2015). A Snapshot of Online Learners: e-Readiness, e-Satisfaction and Expectations. *International Review of Research in Open and Distributed Learning*, 16(2), 171-187.
- Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., & Hall, C. (2016). *NMC Horizon Report: 2016 Higher Education Edition*. Retrieved from <http://cdn.nmc.org/media/2016-nmc-horizon-report-he-EN.pdf>
- Kelly, P., Coates, H., & Naylor, R. (2016). Leading Online Education from Participation to Success. *Educational Studies Moscow*, 3(2016), 34-58.
- Kent, M. (2015). *Access and Barriers to Online Education for People with Disabilities*. Retrieved from <https://www.ncsehe.edu.au/wp-content/uploads/2016/05/Access-and-Barriers-to-Online-Education-for-People-with-Disabilities.pdf>
- Kilpatrick, S., Johns, S., Barnes, R., McLennan, D., Fischer, S., & Magnussen, K. E. (2016). *Exploring the Retention and Success of Students with Disability*. Retrieved from <https://www.ncsehe.edu.au/publications/exploring-the-retention-and-success-of-students-with-disability/>
- Knightley, W. M. (2007). Adult learners online: students' experiences of learning online. *Australian Journal of Adult Learning*, 47(2), 264-287.
- Kruse, A., & Pongsajapan, R. (2012). *Student-Centred Learning Analytics*. Retrieved from <https://cndls.georgetown.edu/m/documents/thoughtpaper-krusepongsajapan.pdf>
- Kuiper, A., Solomonides, I., & Hardy, L. (2015). Time on task in intensive modes of delivery. *Distance Education*, 36(2), 231-245.
- Kuyini, A. B. (2011). Exploring the Effects of Including Students' Ideas and Concerns on their Participation in Online Groups. *International Journal of E-Learning & Distance Education*, 25(3), 1-14, Special Section.
- Kuzilek, J., Hlosta, M., Herrmannova, D., Zdrahal, Z., Vaclavek, J., & Wolff, A. (2015). *OU Analyse: Analysing at-risk students at The Open University*. Retrieved from <http://www.laceproject.eu/learning-analytics-review/analysing-at-risk-students-at-open-university/>
- Lambrinidis, G. (2014). Supporting online, non-traditional students through the introduction of effective e-learning tools in a pre-university tertiary enabling programme. *Journal of Higher Education Policy and Management*, 36(3), 257-267.
- Laurillard, D. (2002). *Rethinking University Teaching: A Conversational Framework for the Effective Use of Teaching Technologies* (2 ed.). London and New York: Routledge Farmer.
- Leece, R. (2015, 27-28 October 2014). *Belonging and Mattering through a Technological Lens – Meeting One Challenge for Open and Distance Learning in 21st Century*. Paper presented at the Eighth EDEN Research Workshop, Oxford UK.
- May, J., Delahunty, J., O'Shea, S., & Stone, C. (2016). Seeking the Passionate Career: First-in-Family Enabling Students and the Idea of the Australian University. *Higher Education Quarterly*, 70(4), 384-399.

- McGivney, V. (2006). Attracting New Groups into Learning: Lessons from Research in England. In J. Chapman, P. Cartwright, & J. E. McGilp (Eds.), *Lifelong Learning, Participation and Equity* (pp. 79-91). Dordrecht, The Netherlands: Springer.
- Michael, K. (2012). Virtual classroom: reflections of online learning. *Campus-Wide Information Systems*, 29(3), 156-165.
- Minhas-Taneja, V. (2017). Interactive online student transition to university. *Journal of the Australian and New Zealand Student Services Association*, 49(2017).
- Moore, C., & Signor, L. (2014). Engaging Diverse Student Cohorts: Did Someone Say Completely Online? *International Journal of Information and Education Technology*, 4(4), 364-367.
- Müller, T. (2008). Persistence of Women in Online Degree-Completion Programs. *International Review of Research in Open and Distributed Learning*, 9(2), 1-18.
- Nazzari, A., Cinanni, G., & Doropoulos, M. (2014). Assessing the Image: Creative Practice in an Online Learning Environment. *The International Journal of the Image*, 4(2), 95-107.
- Nelson, K., & Creagh, T. (2012). Case Study 7: University of New England (UNE) Early Alert Program *Good practice for safeguarding student learning engagement in higher education institutions* (pp. 85-90). Brisbane, Australia: Queensland University of Technology. Retrieved from <https://safeguardingstudentlearning.net/>
- Nichols, M. (2010). Student perceptions of support services and the influence of targeted interventions on retention in distance education. *Distance Education*, 31(1), 93-113.
- O'Shea, S., Lysaght, P., Roberts, J., & Harwood, V. (2016). Shifting the blame in higher education – social inclusion and deficit discourses. *Higher Education Research and Development*, 35(2), 322-336.
- O'Shea, S., May, J., Stone, C., & Delahunty, J. (2017). *First-in-Family Students, University Experience and Family Life*. London: Palgrave MacMillan.
- O'Shea, S., Stone, C., & Delahunty, J. (2015). "I 'feel' like I am at university even though I am online." Exploring how students narrate their engagement with higher education institutions in an online learning environment. *Distance Education*, 36(1), 41-58.
- Oh, E. G., & Kim, H. S. (2016). Understanding Cognitive Engagement in Online Discussion: Use of a Scaffolded, Audio-based Argumentation Activity. *International Review of Research in Open and Distributed Learning*, 17(5), 28-48.
- Open Universities Australia. (2015). *Internal Student Data Report*.
- Open Universities Australia. (2017a). *PREP Units*. Retrieved from <https://www.open.edu.au/courses/preparatory/preparatory-units>
- Open Universities Australia. (2017b). *Start for Success*. Retrieved from <https://www.open.edu.au/courses/arts/open-universities-australia-start-for-success--prep02-2017>
- Panther, B. C., Wright, W., & Mosse, J. A. (2012). Providing a flexible learning environment: Are on-line lectures the answer? *International Journal of Innovation in Science and Mathematics Education*, 20(1), 71-82.
- Park, J. H., & Choi, H. J. (2009). Factors Influencing Adult Learners' Decision to Drop Out or Persist in Online Learning. *Educational Technology and Society*, 12(4), 207-217.
- Parkes, M., Hawkes, G., & Landrigan, B. (2013). *Collaborative Annotated Bibliographies: An Online Strategy to Foster Student Collaboration and Understanding*. Paper presented at the Proceedings of the World Conference on Educational Multimedia, Hypermedia and Telecommunications (ED-MEDIA) 2013, Victoria, Canada.
- Parsell, M. (2014). *Standards for Online Education, Final Report*. Retrieved from <https://www.onlinestandards.net/>
- Pocock, B., Skinner, N., & Ichii, R. (2009). *Work, Life and Workplace Flexibility*. Retrieved from <http://w3.unisa.edu.au/hawkeinstitute/cwl/documents/AWALI-09-full.pdf>
- Rawolle, S., Rowlands, J., & Blackmore, J. (2015). The implications of contractualism for the responsabilisation of higher education. *Discourse: Studies in the Cultural Politics of Education*. Retrieved from <http://dx.doi.org/10.1080/01596306.2015.1104856>

- Reedy, A. (2011). *Equity in a digital world: engaging Indigenous learners*. Paper presented at the Ascilite Conference 2011, Hobart, Tasmania.
- Regional Universities Network. (2017). *Facts and Figures on Regional Australia*. Retrieved from <http://www.run.edu.au/resources/Regional%20Students.pdf>
- Resop Reilly, J., Gallagher-Lepak, S., & Killion, C. (2012). "Me and My Computer": Emotional Factors in Online Learning. *Nursing Education Perspectives*, 33(2), 100-105.
- Rienties, B., Edwards, C., Gaved, M., Marsh, V., Herodotou, C., Clow, D., Cross, S., Coughlan, T., Jones, J. & Ullmann, T. (2016). *Scholarly insight 2016: a Data wrangler perspective*. Retrieved from <https://core.ac.uk/download/pdf/77067424.pdf>
- Salmon, G. (2014). Learning Innovation: A Framework for Transformation. *European Journal of Open, Distance and e-Learning*, 17(2), 219-235.
- Salmon, G., Ross, B., Pechenkinac, E., & Chase, A.-M. (2015). The space for social media in structured online learning. *Research in Learning Technology*. 23(28507). Retrieved from <http://dx.doi.org/10.3402/rlt.v3423.28507>
- Sclater, N., Peasgood, A., & Mullan, J. (2016). *Learning Analytics in Higher Education: A review of UK and international practice. Full report*. Retrieved from <https://www.jisc.ac.uk/sites/default/files/learning-analytics-in-he-v3.pdf>
- Shackelford, J. L., & Maxwell, M. (2012). Sense of Community in Graduate Online Education: Contribution of Learner to Learner Interaction. *The International Review of Research in Open and Distributed Learning*, 13(4).
- Shah, M., Goode, E., West, S., & Clark, H. (2014). Widening Participation in Higher Education through Online Enabling Education. *Widening Participation and Lifelong Learning*, 16(3), 36-57.
- Signor, L., & Moore, C. (2014). Open Access in Higher Education—Strategies for Engaging Diverse Student Cohorts. *Open Praxis*, 6(3), 305-313.
- Simpson, O. (2013). *Supporting Students in Open and Distance Learning*. London and New York: Routledge-Farmer.
- Slade, S., & Prinsloo, P. (2013). Learning analytics: ethical issues and dilemmas. *American Behavioral Scientist*, 57(10), 1509-1528.
- Slade, S., & Prinsloo, P. (2015). *Stemming the flow: improving retention for distance learning students*. Paper presented at the EDEN 2015 Annual Conference. Retrieved from <http://oro.open.ac.uk/44537/>
- Smith, J., Trinidad, S., & Larkin, S. (2015). Participation in higher education in Australia among underrepresented groups: What can we learn from the Higher Education Participation Program to better support Indigenous learners? *Learning Communities: International Journal of Learning in Social Contexts, Special Issue: Indigenous Pathways and Transitions into Higher Education*(17), 12-29.
- Stone, C. (2008). Listening to individual voices and stories - the mature-age student experience. *Australian Journal of Adult Learning*, 48(2), 263-290.
- Stone, C. (2013). *Helping online students succeed*. Informa. Retrieved from <https://www.slideshare.net/informastudenthealth/catherine-stone>
- Stone, C., Hewitt, C., & Morelli, E. (2013). *Enhancing academic achievement in online open education*. Paper presented at the The Higher Education Technical Agenda (THETA) 2013, Hobart, Tasmania, Australia. Retrieved from <http://eprints.utas.edu.au/16366/>
- Stone, C., & O'Shea, S. (2013). Time, money, leisure and guilt – the gendered challenges of higher education for mature-age students. *Australian Journal of Adult Learning*, 53(1), 95-116.
- Stone, C., O'Shea, S., May, J., Delahunty, J., & Partington, Z. (2016). Opportunity through online learning: experiences of first-in-family students in online open-entry higher education. *Australian Journal of Adult Learning*, 56(2), 146-169.
- The Open University UK. (2014/15). *Facts and Figures*. Retrieved from http://www.open.ac.uk/about/main/sites/www.open.ac.uk.about.main/files/files/fact_figures_1415_uk.pdf

- The Open University UK. (2017). *Access Courses*. Retrieved from <http://www.open.ac.uk/courses/do-it/access>
- The Open University UK. (2017). *Quality and standards fact sheets*. Retrieved from <http://www.open.ac.uk/about/main/management/policies-and-statements/quality-and-standards-fact-sheets>
- The University of Newcastle, Australia. (2017a). *Academic Survival Skills*. Retrieved from <http://www.newcastle.edu.au/future-students/uonprep-bridging-courses/academic-survival-skills>
- The University of Newcastle, Australia. (2017b). *Open Foundation Online*. Retrieved from <http://www.newcastle.edu.au/future-students/open-foundation/your-options>
- Tinto, V. (2008). *Access without support is not opportunity*. Paper presented at the 36th Annual Institute for Chief Academic Officers Seattle, Washington. Retrieved from <https://vtinto.expressions.syr.edu/wp-content/uploads/2013/01/Council-of-Independent-Colleges-2008-Keynote.pdf>
- Tyler-Smith, K. (2006). Early Attrition amongst First Time eLearners: A Review of Factors that Contribute to Drop-out. Withdrawal and Non-completion Rates of Adult Learners undertaking eLearning Programmes. *MERLOT Journal of Online Learning and Teaching*, 2(2), 73-85.
- Verenikina, I., Jones, P. T., & Delahunty, J. (2017). *The Guide to Fostering Asynchronous Online Discussion in Higher Education*. Retrieved from www.fold.org.au/docs/TheGuide_Final.pdf
- West, D., Huijser, H., Jiaotong, X., Heath, D., Lizzio, A., Toohey, D., Miles, C., Searle, B. & Bronnimann, J. (2016). Higher education teachers' experiences with learning analytics in relation to student retention. *Australasian Journal of Educational Technology*, 32(5), 48-60.
- Wolff, A., Zdrahal, Z., Nikolov, A., & Pantucek, M. (2013). *Improving retention: predicting at-risk students by analysing clicking behaviour in a virtual learning environment*. Paper presented at the Third Conference on Learning Analytics and Knowledge (LAK 2013), 8-12 April 2013, Leuven, Belgium. Retrieved from <http://lakconference2013.wordpress.com/>
- Woodthorpe, J. (2015). *Improving student attainment and completion through mid-module tutor conversations*. SST Enhancement Digest. The Open University UK. Milton Keynes.
- Yoo, S. J., & Huang, W. D. (2013). Engaging Online Adult Learners in Higher Education: Motivational Factors Impacted by Gender, Age, and Prior Experiences. *The Journal of Continuing Higher Education*, 61(3), 151-164.

Appendices

Appendix 1: Interview Schedule

Chief Investigator – Dr Cathy Stone
Equity Fellow, National Centre for Student Equity in Higher Education
CEEHE, The University of Newcastle, Australia
cathy.stone@newcastle.edu.au
Ph: +61 410-348-794



OPPORTUNITY THROUGH ONLINE LEARNING: IMPROVING STUDENT ACCESS, PARTICIPATION AND SUCCESS IN ONLINE HIGHER EDUCATION

N.B. Questions are meant as prompts to elicit a conversation, rather than set questions

Name:

Position:

Institution:

1. Please tell me about your role at (institution)
2. What specific involvement do you have in undergraduate online learning? How long have you been involved in this? In what ways?
3. How familiar are you with the particular demographics of the online student cohort within your institution generally (e.g. gender, age, equity status, first-in-family status)?
4. What challenges/opportunities do you think this presents for the institution and staff within it?
5. Could you please tell me about any interventions or strategies that you use, or any that you are aware of others using, which are having a positive impact on student access, retention and/or student academic success?
6. How do you know about this positive impact? How is this being measured/evaluated? Have there been any improvements/changes as a result of evaluation?
7. Do you have any non-identifying data that you could share with me from any measurement/evaluation that has been conducted?
8. From your experience, do you have any other thoughts on what types of intervention/teaching strategies/support leads to an improvement in student retention and academic success, particularly those from disadvantaged backgrounds (equity groups)? Is there any evidence that you know of which supports these views?
9. Is there anything else that you would like to say or to tell me in relation to improving student retention and academic success in online education?

Complaints about this research

This project has been approved by the University's Human Research Ethics Committee, Approval No. H- 2016-0035. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au.

Appendix 2: Outcomes and dissemination

At the time of writing this report, conference, seminar and workshop presentations about the research and its preliminary findings have taken place at the following:

- Universities' Association for Lifelong Learning Conference (UALL), Oxford, UK - March 2016.
- Widening Participation Conference, The Open University, Milton Keynes, UK - April 2016.
- Staff Seminar, the University of Newcastle (UON), Newcastle - May 2016.
- Students, Transitions, Achievement, Retention & Success (STARS) Conference, Perth - June 2016.
- Higher Education Research & Development Society of Australasia (HERDSA) Conference, Fremantle - July 2016.
- Asia Pacific Higher Education Summit, Melbourne - July 2016.
- Department of Education & Training (DET) Seminar Series, Canberra - August 2016.
- University of Southern Queensland (USQ) Social Justice Seminar, Toowoomba - September 2016.
- Staff Seminar at the University of New England (UNE), Armidale - September 2016.
- Staff Seminar at Southern Cross University (SCU), Lismore - September 2016.
- Staff Seminar at the University of Tasmania (UTAS), Launceston - September 2016.
- First-in-Family Forum, the University of Wollongong (UOW), Wollongong - November 2016.
- National Centre for Student Equity in Higher Education (NCSEHE) Equity Forum, Canberra - November 2016.
- Australian Association for Research in Education (AARE) Symposium, Melbourne - December 2016.
- Australia & New Zealand Student Services Association (ANZSSA) Conference, Auckland, NZ - December 2016.
- Seminar for Western Australian Universities, NCSEHE, Curtin University - February 2017.
- Connections Seminar, the University of New South Wales (UNSW), Kensington - March 2017.

At the time of writing this report, the following upcoming presentations on the Final Report and *Guidelines* have been scheduled:

- Staff seminar at the OU, Milton Keynes, UK - April 2017.
- UALL Conference, York, UK - April 2017.
- Seminar for the South Australian branch of HERDSA, the University of South Australia (UniSA), Adelaide - May 2017.
- Breakfast Seminar, Teaching Innovation Unit, UniSA, Adelaide - May 2017.

Other dissemination:

- Article in the Australian Newspaper's Higher Education Supplement: New online guidelines aim to arrest low completion rates by Darragh O'Keefe - 1 March, 2017.
- Total of seven progress bulletins emailed to mailing list of 250, as well as published on NCSEHE website - between May 2016 and February 2017.

Related publications:

The following publications, co-authored by the author of this report, have been published during 2016 with one in press for publication in 2017. While they are not directly part of the research conducted for this report they are closely related, with the research behind these publications helping to inform the findings presented in this report.

- May, J., Delahunty, J., O'Shea, S., Stone, C. (2016). Seeking the Passionate Career: First-in-Family Enabling Students and the Idea of the Australian University, *Higher Education Quarterly*, Volume 70, No. 4, October 2016, pp 384–399
- O'Shea, S., May, J., Stone, C., & Delahunty, J. (2017). *First-in-Family Students, University Experience and Family Life*. London: Palgrave MacMillan. (In Press).
- O'Shea, S., Stone, C., Delahunty, J. & May, J. (2016): Discourses of betterment and opportunity: exploring the privileging of university attendance for first-in-family learners, *Studies in Higher Education*, DOI: 10.1080/03075079.2016.1212325
- Stone, C., O'Shea, S., May, J., Delahunty, J., & Partington, Z. (2016). Opportunity through online learning: experiences of first-in-family students in online open-entry higher education. *Australian Journal of Adult Learning*, 56(2), 146-169.

Appendix 3: Progress Bulletins

The six Progress Bulletins distributed between May 2016 and October/November 2016

MAY 2016 BULLETIN

*Project Update shared by
NCSEHE Equity Fellow, Dr Cathy Stone*



Equity Fellow News

Opportunity through online learning: improving student access, equity, success and retention in online higher education



Equity Fellowship Research Project Update

Welcome to the first of what will be regular monthly updates on the progress of this research. Thank you to all those who have agreed to participate in this project and particularly to those who have already been interviewed. Many thanks also for the interest and support that I am receiving for this project from the NCSEHE, which is funding this project, as well as from the Centre of Excellence in Equity in Higher Education (CEEHE) at the University of Newcastle, which employs me. The University of Newcastle's Human Ethics Committee has also been responsible for granting ethical approval for the project to be undertaken.

Who is involved?

So far, the following Institutions have consented to be involved as participants: The Open University UK; Open Universities Australia (OUA); Macquarie; RMIT; Swinburne; Curtin; Murdoch and the University of New England. I am in discussion with six other Australian universities, all of which offer substantial distance/online undergraduate programs, and I am waiting on their final response.

I have interviewed a range of academic and professional staff at both the Open University UK (a total of 22 staff during March and April) and at OUA (13 staff in May) and have begun interviews with Macquarie staff (1 completed with 3 more scheduled for June/July). Interviews are in the process of being scheduled for June/July at Swinburne, RMIT, Curtin and Murdoch.



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Emerging themes

During initial analysis of the data gathered so far, the following themes are emerging – and I am sure that none of these will come as any surprise to anyone working in online learning.

- Relationship between class tutor and students is of key importance to student engagement – i.e. tutor who is a regular and responsive ‘presence’ and who provides prompt feedback and support; implications for tutor-student ratios and realistic resourcing;
- Need for institution-wide recognition of the diversity and special needs of the online student body, e.g. high proportions of mature-age, working part-time or full-time, family and caring responsibilities, first-in-family at university, no or low entry qualifications, many with disability;
- Collaboration between teaching and support is crucial, as is embedding learning skills and support within curriculum as well as easily accessed, proactive and well-promoted additional assistance outside it;
- Regular engagement contact points between students, tutors and student support services, instigated by the institution, that reaches out to students, is personalised and targeted along the student journey;
- Role of learning analytics in determining those ‘at risk’, tailoring interventions and ensuring personal contact at appropriate times; the more ‘personal’ and relevant the intervention the more successful;
- ‘Front-loading’ of interventions – to explore student expectations, provide a more realistic understanding of what’s involved, build sense of belonging and ‘someone cares’, improve early engagement and reduce early departure;
- Importance of learning design in engaging and retaining students
- Data from OU (UK) and OUA demonstrating that retention and completion of modules/units raised significantly by early personal contact by phone (from tutor at OU and from student advisors at OUA) to new students; also data clearly demonstrating positive relationship between Preparatory studies (Access modules at OU; PREP units at OUA) and pass rates/completion/retention;
- Examples of valuable pilots and projects with promising results; a need for more/improved measuring/evaluation of strategies as well as mainstreaming those shown by pilots and projects to be successful (again, implications for resourcing);
- Student acquisition and student retention of equal importance – again, funding implications;
- Peer-to-peer support underdeveloped – scope to encourage more/improved strategies;
- Impact of wider issues of higher education and funding policy when they are largely geared around ‘traditional on-campus full-time school leaver’ students; can create challenges for both institutions and individual students.

What next?

Each month I will be providing an update on progress as I gather and analyse more data, with the aim being to produce a final report containing National Guidelines for improving the access, success and retention of students in online undergraduate education. This report is due by the end of March 2017.

I would welcome feedback from participants receiving this bulletin, as well as from any other interested recipient.

Want to know more?

If you would like to be involved in this research or would like more information, please contact me on cathy.stone@newcastle.edu.au or 0410-348-794



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*Project Update for June 2016 shared by
NCSEHE Equity Fellow, Dr Cathy Stone*



Equity Fellow News

Opportunity through online learning: improving student access, success and retention in online higher education



Equity Fellowship Research Project Update

Welcome to the end-of-June update on the progress of this research. Thank you to all participants for your involvement, as well as to the NCSEHE at Curtin University and CEEHE at the University of Newcastle, for their ongoing support of this project.

Progress Through June

A presentation on the project and its preliminary findings was made at the STARS (Students, Transition, Achievement, Retention & Success) conference held in Perth at the end of June, with much interest and useful feedback generated.

Interviews were conducted with 33 university staff members across four institutions, bringing the total number of staff interviewed to 69. As shown in the table below, the number of participating institutions rose to 10.



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Opportunity through online learning

Participating Institutions	Progress with Interviews	Number of Staff Interviewed
The Open University, UK	Completed	22
OUA	Completed	12
Swinburne	Completed	12
RMIT	Completed	12
Murdoch	In progress	8
Macquarie	In progress	3
Curtin	Scheduled for July	
USQ	Scheduled for September	
UON	Scheduled for July	
UNE	To be arranged	
Total staff interviewed		69

Seven other Australian universities have been invited to participate.

Emerging themes

Themes outlined in the May progress bulletin continued to emerge strongly from the qualitative interview data, as well as from several evaluations of pilot studies and other strategies that have been measured, where this is available and able to be shared.

From listening also to the online student voice, using data from my and colleagues' previous Australian research with students studying online (O'Shea, Stone & Delahunty, 2015; Stone, O'Shea, May, Delahunty & Partington, 2015) as well as other relevant literature, these emerging themes appear to be closely correlating with students' concerns and challenges.

Listed below are just a few examples of themes that link closely to students' lived experience. The student quotes are taken directly from the two studies mentioned above while the staff quotes are taken directly from data gathered so far within this project.

1. Importance of institution-wide approach to online learning:

"Realising that...universities don't really care about or engage with online students very much. In fact, I think a lot of them think external students are a burden they would rather not have to cater for." (Student)

"It was sort of marginalised, probably because it wasn't understood.... and still I think there's an innate prejudice against online teaching." (Academic)



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Opportunity through online learning

2.Importance of the Tutor/Student relationship:

"I guess the lows for me is just, I guess not having that relationship with people I guess... I know that the lecturers are lovely and they're very helpful and all that but I guess it would be nice for them to more connect with us students." (Student)

"The tutor of the academic course is the face of the university, and when I say "face" it doesn't mean literally a face; it can just be a name or a voice at the end of an online conversation, but it is the human connection point between the student and the university which I think can often make all the difference." (Learning Designer)

3.Importance of appropriate and engaging Learning Design:

"What works in person is not the same as online... I thought it would just be more, sort of, more tailor made for it than what it is." (Student)

"Making sure that content actually promotes engagement because you could have content there with a bunch of PDFs and a bunch of boring stuff - that will not trigger engagement." (Academic)

What next?

During July I am conducting interviews with staff at Curtin University and the University of Newcastle, as well as completing interviews with Macquarie and Murdoch staff. A further conference presentation has been given at the HERDSA conference on 5 July in Fremantle plus an invited presentation is scheduled for the 2016 Higher Education Summit on 14 July in Melbourne. Analysis of data will continue and further interviews will be conducted at participating universities. Preparations are underway for the placement in August at the Department of Education in Canberra, which is a requirement of each of the Equity Fellows, for the purposes of information sharing that I am sure will be mutually very useful and interesting.

I would welcome feedback from participants receiving this bulletin, as well as from any other interested recipient. Please feel free to send this on to any of your colleagues.

Want to know more?

If anyone would like more information, or would like to be added to the mailing list to receive these update, please contact me on cathy.stone@newcastle.edu.au or 0410-348-794

References

O'Shea, S., Stone, C. & Delahunty, J. (2015) "I 'feel' like I am at university even though I am online." Exploring how students narrate their engagement with higher education institutions in an online learning environment, *Distance Education*, 36:1, 41-58.

Stone, C., O'Shea, S., May, J., Delahunty, J. & Partington, Z. (2016) 'Opportunity through online learning: Experiences of first-in-family students in online open-entry higher education', *Australian Journal of Adult Learning*, 56: 2, 149-169.



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Equity Fellow News

Project Update for July 2016
NCSEHE Equity Fellow, Dr Cathy Stone



Opportunity through online learning: improving student access, success and retention in online higher education



Equity Fellowship Research Project Update

Welcome to the update for July on the progress of this research. Interest in this project continues to grow, with the distribution list for these bulletins now numbering 142. Thanks to all of you for your continued involvement and please send this bulletin on to any other interested colleagues.

Progress through July

During July, a further 25 participants were interviewed, across five institutions, bringing the total number of participants by 31 July to 93. A further four Australian universities (Charles Sturt University, Charles Darwin University, the University of Tasmania and La Trobe University) provided institutional consent for their participation, bringing the total number of participating institutions to 14. See updated progress table below.



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Participating Institutions	Progress with Interviews	Participating Staff
The Open University, UK	Completed	22
OUA	Completed	12
Swinburne	Completed	12
RMIT	Completed	12
Murdoch	Completed	10
Macquarie	Completed	5
Curtin	Completed	15
La Trobe	In progress	2
UON	In progress	3
USQ	Scheduled	
UNE	Scheduled	
CDU	Scheduled	
UTAS	Scheduled	
CSU	To be arranged	
Total staff interviewed		93

Visits to USQ, UNE, UTAS and CDU have been scheduled for September.

Dissemination of progress and preliminary findings

A presentation was given at the HERDSA conference on 5 July in Fremantle and at the 2016 Higher Education Summit on 14 July in Melbourne. I am also offering brief presentations at each participating university; e.g. a presentation will be given at a Social Justice seminar on 8 September at the University of Southern Queensland.

Key theme for the month: Importance of teacher presence

This month I am highlighting two examples of the effective use of teacher-presence to engage, support and retain online students in their learning.



Mid-module personal conversations between tutor and students: example of a pilot study from the Open University, UK

A pilot study run at the Open University UK, in which students who, by mid-module, were deemed to be 'at risk' as evidenced by problems with completing and/or passing assessments, were contacted by phone by their tutor. Paid time was allocated to the tutors for the calls, which were designed to motivate the student to complete the module and to help them develop a strategy to pass further assessments. Tutors were knowledgeable about support services available to students and the referral process, due to the structure at the OU of Student Support Teams (SSTs) which bring Faculty and Support staff together in discipline-related teams.

Results showed that of 'at risk' students with whom their tutor managed to speak, 65% passed; while of 'at risk' students with whom their tutor did not manage to speak, only 35% passed. Similarly positive results were also found using a 'predictive model' for determining the at-risk students to be called by phone. The study concludes that: "personalised telephone guidance from their tutor improves the chances of 'at risk' students passing their module" and also stresses the need for appropriate funding for the tutor to make the calls.

Maintaining a strong tutor presence throughout the course: example from a casual tutor at an Australian Metropolitan University

This is but one of many, many examples of tutor dedication to online students. Below are just a few of the steps taken by one particular tutor to try to provide a sense of 'being there' for the student, despite the lack of a physical presence.

- **Creating an obvious presence** through welcome posts at the start, welcoming students by name, introducing self.
- **Posting a weekly good morning** and welcome to week X - reminding about upcoming deadlines, assessments etc.
- **Providing personal recognition** to individual students who reach particular milestones
- **Personal emails to make contact with 'missing' students:** e.g. week 3 email to all students who have not logged in or appeared in the discussions
- **Email contact with students** who have logged in but not submitted assessments to check if they are OK.
- **Providing extensive feedback on first assessment** and guidance where required, as well as general feedback post with instructions about how to access/interpret individual feedback.
- **Scanning all discussion posts every day.** Aiming to ensure no one person is dominating, netiquette is being observed and providing additional prods on points if necessary.
- **Trying to solve problems that day** (technical issues, missing readings etc.), or finding alternative solutions.

This tutor consistently achieves very high student satisfaction ratings and retention/completion rates for the units/courses taught, as well as being nominated for a Teacher Excellence Award by the students. However, it should be noted that tutors can spend many personal hours on student contact, over and above their paid hours which are often not sufficient to ensure an effective level of contact.

What next?

During August I am undertaking a placement at the Australian Government Department of Education and Training, which is a requirement of each of the Equity Fellows, for the purposes of information sharing and building communication. Analysis of data and liaison with participating universities will continue and further examples of effective practice will be discussed in the coming months.

Want to know more?

For further information, or to be added to the mailing list to receive these updates in the future, please contact me on cathy.stone@newcastle.edu.au or 0410-348-794.

References

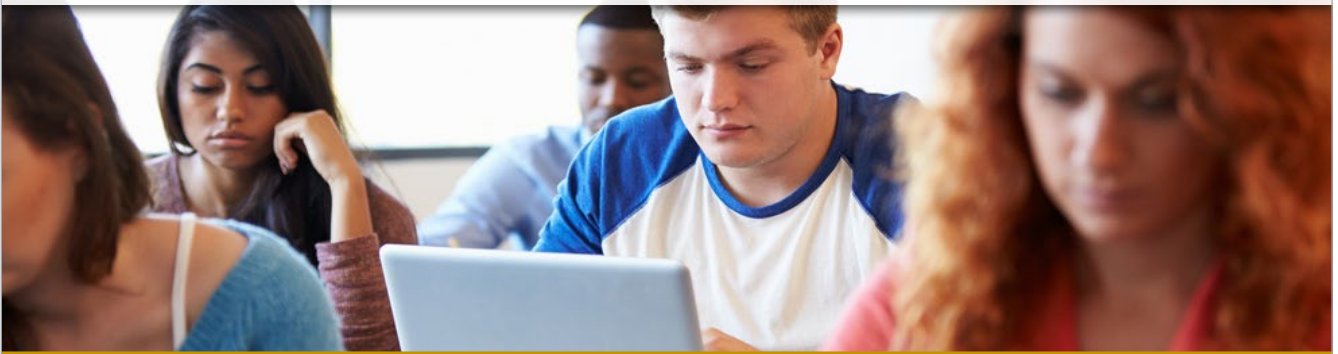
Woodthorpe, John (2015), "Improving student attainment and completion through mid-module tutor conversations," *SST Enhancement Digest*, Issue 2 (July), p.2-5. (Internal publication by the Teaching and Learning Unit, The Open University UK.)

Equity Fellow News

Project Update for August 2016
NCSEHE Equity Fellow, Dr Cathy Stone



Opportunity through online learning: improving student access, success and retention in online higher education



Equity Fellowship Research Project Update

Welcome to this progress update for August 2016. Thanks to all of you for your continued involvement and please send this bulletin on to any other interested colleagues. As always, I welcome your feedback.

Placement with Department of Education & Training

Much of August was spent undertaking a three week placement at the Australian Department of Education & Training in Canberra, a requirement of each of the Equity Fellows, for the purposes of information sharing and building communication. I was based with the Equity Policy and Programs team, within the Governance, Quality and Access Unit. This, in turn, is part of the Higher Education Group, within the broader Higher Education, Research and International (HERI) Cluster. I had the opportunity to interact on a day-to-day basis with the staff responsible not only for Equity Policy and Programs (e.g. HEPPP, Equity Policy, Indigenous policy) but also with those responsible for Student Information and Learning (e.g. HE data, grants, awards, QILT) and for Funding Policy and Legislation (e.g. FEE-HELP, HECS-HELP, Financial Analysis).



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Bringing together Higher Education research practitioners with Higher Education policy-makers and administrators, is an innovative and creative feature of the Equity Fellowships, enabling us to learn from each other and to share our different perspectives on student equity. This occurred both informally, through conversation and discussion, as well as more formally through meetings and presentations.

Progress on Research

94 participants have been interviewed since the start of the project. During August a further two Australian universities (Southern Cross University and Flinders University) provided institutional consent for their participation, bringing the total number of participating institutions to 16. Interviews have been completed at nine institutions, while interviews at the remaining seven universities have been scheduled through September and October. See progress table below:

Participating Institutions		Progress with Interviews
1	The Open University, UK	Completed
2	OUA	Completed
3	Swinburne	Completed
4	RMIT	Completed
5	Murdoch	Completed
6	Macquarie	Completed
7	Curtin	Completed
8	La Trobe	Completed
9	UON	Completed
10	USQ	September
11	UNE	September
12	CDU	September
13	UTAS	September
14	SCU	September
15	CSU	September / October
16	Flinders	October

Transcription of interviews continued during August, as did thematic analysis of the data generated, using NVivo 11.

Dissemination of progress and preliminary findings

A presentation on the project, its progress and some preliminary findings was given at the “HERI Bite-Size Seminar Series” at the Department of Education & Training. A similar presentation is scheduled for the University of Southern Queensland’s “Social Justice Seminar” on 8 September. Whilst in Canberra I also met with a number of academic, learning design and educational technology staff, from both ANU and the University of Canberra, to discuss the project. Interest in receiving regular updates continues to grow, with 181 people on the mailing list for these bulletins, which are now also available on the NCSEHE webpage at www.ncsehe.edu.au/news-events/newsletters/.

This month’s ‘Snapshot’ from findings: Building a Community of Learning

The importance of building and developing a Community of Learning, to which online students feel engaged and committed, has been continually raised by academic and professional staff in interviews so far, as one of the most important considerations in improving online student retention and success. Below are just a few examples from the data, in which staff from different institutions discuss and describe the importance of a strong Community of Learning; what also comes across in a number of these quotes is the view that this is dependent not only on the efforts of the individual staff involved, but also on the commitment and approach of the institution as a whole.

If you have great content and a poor tutor, student satisfaction is low. If you have great content, great tutor – high satisfaction. Poor content, great tutor – reasonable to high satisfaction. It’s your tutor that can make or break so it comes back to that community of learning. If you’ve got both, you’ve got a very satisfied customer and we have to remember, they’re not online because they can’t come to campus; they’re online because they’ve made the choice to be online and it’s not secondary education. And, you know, until the whole university thinks like that and it’s core business, then we’re always pushing things.

(Program Coordinator – metro university, Australia)

You can have a mechanism or a structure, but it won’t be that in itself that will determine whether or not it succeeds, because there has to be the buy-in by everybody who’s involved, and they have to understand what’s been done, why and how, so that they’re bringing the students along with it.

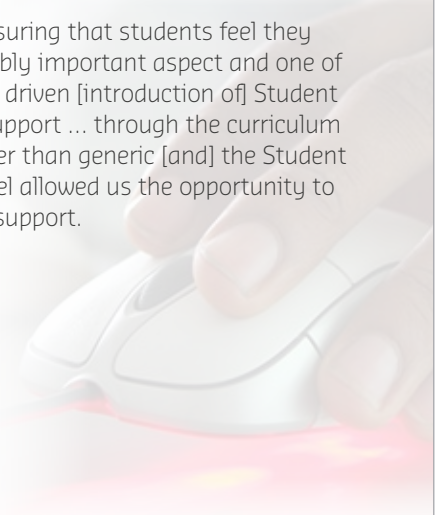
(Course Coordinator, metro university, Australia)



For online students and retention and success, yeah, for me the short answer is fostering students' sense of belonging to a learning community.
(Course Coordinator, regional university, Australia)

OUA classes for a long time weren't fully integrated into our workload models and so we found that we didn't have casual or tutorial support to manage that online mediation and discussion so that was also very challenging... Now we have more dedicated support staff to focus on the online discussion elements of the classes, the forums, and to be able to give those students a sense of actually speaking to someone who's dedicated to talking back at them... and it's also allowed us to explore more innovative ways to engage with the online students apart from just forums... [and] it made a huge difference in terms of student retention.
(Coordinator, Learning & Teaching, OUA Provider University)

Finding ways of ensuring that students feel they belong is an incredibly important aspect and one of the things that has driven [introduction of] Student Support teams... support ... through the curriculum of their choice rather than generic [and] the Student Support team model allowed us the opportunity to contextualise that support.
(Open University, UK)



Want to know more? Got any feedback?

For any questions or feedback, or to be added to the mailing list to receive these updates in the future, please contact me on cathy.stone@newcastle.edu.au or 0410-348-794, or find them at: www.ncsehe.edu.au/news-events/newsletters/.

Equity Fellow News

Project Update for September 2016
NCSEHE Equity Fellow, Dr Cathy Stone



Opportunity through online learning: improving student access, success and retention in online higher education



Equity Fellowship Research Project Update

Welcome to this progress update for September 2016. Once again, my thanks for your involvement and interest in this research. I invite you to forward this to interested colleagues and I look forward to any feedback.

Progress during September

September was a very busy month involving visits to five universities in regional and remote areas around the country: the University of Southern Queensland at Toowoomba, QLD; the University of New England in Armidale, NSW; the Lismore (NSW) Campus of Southern Cross University; both the Launceston and Hobart campuses of the University of Tasmania; and Charles Darwin University in the Northern Territory. At each of these universities, distance students are strongly represented and in many Faculties and Schools they form the majority of the student cohort. As a result, regional universities tend to view distance and online teaching and learning very much as 'core business'.



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Equity in Higher Education



Curtin University

Interviews through September brought the total number of university staff participating in this project so far to 138. Interviews have now been completed at 14 institutions, with planning in place to conduct interviews at a further two universities in October. See progress table below:

Participating Institutions		Progress with Interviews
1	The Open University, UK	Completed
2	OUA	Completed
3	Swinburne	Completed
4	RMIT	Completed
5	Murdoch	Completed
6	Macquarie	Completed
7	Curtin	Completed
8	La Trobe	Completed
9	UON	Completed
10	USQ	Completed
11	UNE	Completed
12	CDU	Completed
13	UTAS	Completed
14	SCU	Completed
15	CSU	October
16	Flinders	October

Transcription of the interviews and analysis of the data generated continues on an ongoing basis.



Dissemination of Progress and Preliminary Findings

A presentation on the project, its progress and preliminary findings was given at the University of Southern Queensland's [Social Justice Symposium](#) on 8 September, with similar presentations given at Southern Cross University, the University of New England and the University of Tasmania, to groups of interested academic and professional staff. These presentations have generated further interest in the project, with the mailing list for progress reports now numbering 230. Reports from previous months can be found [here](#), on the NCSEHE webpage.

This Month's 'Snapshot' from Findings: Understanding the Student Cohort

Continually raised in interviews, by both academic and professional staff, is the importance of knowing who the students are and understanding their particular characteristics – both in terms of the strengths they bring with them to study and also in terms of their particular needs. Through knowing more about the cohort, many staff argue that it then becomes possible to provide a more personalised experience, such as offering greater flexibility where needed. It can also help staff to encourage students to appreciate and draw upon their past and current life and work experience to aid them in their studies, rather than discounting it.

The following quote from a staff member, who manages a student engagement program at a regional university where distance students are in the majority, reflects on the existing capacities that many online students bring with them to their studies:

If there's an Education student, a mother who's got three kids who's returning to... or going back to work, wants to be a teacher, doing Education, she might be running the P&C, doing reading groups at school, all of which are relevant to their course of study... it came to me sort of an epiphany when one student... I said "Well, you tell me what you do" and she said "I'm just a mum. I just run the P&C, I organise the \$100,000 fete every year" and all these other things...



This same staff member goes on to discuss ways in which the institution can encourage and support such students positively, without taking a deficit approach:

Just being...understanding, knowing that their lives are all very complicated and making allowance for it; and don't take a deficit approach that they shouldn't be here if they can't fit into our structure – that we try and be as flexible and make... yeah, giving everybody the opportunity to succeed rather than trying to force them through unnecessary hoops... I think we could be a lot more accommodating and understanding and recognising that this is the real life of these people.

The importance of understanding students' circumstances and offering greater flexibility accordingly is representative of the views expressed by many others. For example, a Coordinator within a student Engagement and Retention area of a regional university makes the comment that, "I don't think we're moving quickly enough to be responsive to the sort of students that we're accepting..." while an academic with responsibility for an online Pathways Program at another regional university says the following:

I do think universities operate in a not very flexible way sometimes. You know, we have policies obviously that have to be followed and procedures and guidelines which are all couched in terms which allow us to bend them a little bit under exceptional circumstances and there's a lot of rhetoric about the need for flexibility in the institutions and so on, but fundamentally, there's not the degree of flexibility that students – a proportion of students – would like there to be in order to be successful... I think institutions could do more to be a bit more accommodating and flexible in their approach to supporting students.



Plans for October

Following some planned leave in the first half of October I will be visiting Adelaide towards the end of the month to interview staff at Flinders University. In the meantime, I also hope to be conducting interviews by phone and Skype with staff at Charles Sturt University, which will complete the data-gathering phase of the project.

Questions or Feedback?

Please contact me on cathy.stone@newcastle.edu.au for any questions or feedback, or to be added to the mailing list to receive future monthly progress reports. All [past copies](#) can be accessed from the NCSEHE website.

Equity Fellow News

Project Update for October/November 2016
NCSEHE Equity Fellow, Dr Cathy Stone



Opportunity through online learning: improving student access, success and retention in online higher education



Equity Fellowship Research Project Update

Welcome to the last of my progress updates for 2016. The Final Report from this exciting project will be coming out by the end of March 2017, so stay tuned!

Progress during October and November

October and November 2016 saw the completion of qualitative interviews, with face-to-face interviews at Flinders University and telephone interviews with staff at Charles Sturt University. This brings the final number of interviewees to 150, across 16 higher education institutions; 15 in Australia, plus the Open University UK.

The table below provides a list of the participating institutions, including their key locations.

Table 1 Participating institutions

Participating Institutions		Key Location/s
1	The Open University, UK	Various locations in the UK, metropolitan & regional
2	Open Universities Australia	Offers online HE units and courses provided by 13 universities around Australia, both metropolitan & regional/remote in VIC, NSW, QLD, NT, WA & SA
3	Swinburne University*	Metropolitan VIC
4	RMIT University*	Metropolitan VIC
5	Macquarie University*	Metropolitan NSW
6	Murdoch University*	Metropolitan & regional WA
7	Curtin University*	Metropolitan & regional WA
8	La Trobe University*	Metropolitan & regional VIC
9	The University of Newcastle	Regional NSW
10	The University of Southern Queensland	Regional QLD
11	The University of New England*	Regional NSW
12	Charles Darwin University*	Metropolitan, regional & remote NT
13	The University of Tasmania	Metropolitan & regional TAS
14	Southern Cross University	Regional NSW & QLD
15	Charles Sturt University	Regional NSW
16	Flinders University	Metropolitan & regional SA; remote NT

* In addition to offering their own online programs, these universities also provide a number of OUA online units and courses.



► Preliminary findings

As more interviews have been conducted and analysed, the preliminary findings are becoming increasingly well-defined. The bullet points below summarise the factors that continue to emerge most strongly from the data as being of crucial significance in successfully engaging and retaining online students.

- Institution-wide recognition and understanding of the diversity and needs of the online student body; offering adequate institutional flexibility in response
- Strategic institutional approach to ensure consistency and quality of online delivery and teaching standards, including teacher training and adequate resourcing
- Early interventions to ensure realistic student expectations, facilitate appropriate preparation and improve early engagement
- Vital role of “online teacher presence” in building sense of belonging to a learning community
- Learning design, curriculum and pedagogy that are engaging, supportive and specific to online delivery
- Collaboration between teaching and support, embedding support within curriculum, including help with technology
- Harnessing the capacity of learning analytics to inform appropriate interventions, personalised and targeted along the student journey

► Dissemination

During November there will be several presentations on the project and its findings; at the [Conversations about Retaining and Engaging First-in-Family learners in HE Forum](#) at the University of Wollongong, the [NCSEHE 2016 National Research Forum](#) in Canberra and the [AARE Conference](#) in Melbourne. The number of people on the mailing list for progress updates has grown to 243, with the monthly updates also published [here](#) on the NCSEHE webpage. Each progress update attempts to provide a glimpse of the data that is informing the key findings emerging. In this update, the importance of early intervention is highlighted.

'Snapshot' from findings: Importance of Early Intervention

The interview data shows strong agreement, across different universities, disciplines and areas of work, about the importance of early intervention, to realistically address student expectations and help them develop the academic and technology skills necessary for online higher education. One common concern, reflected by the quotes below, is that messages used to market online courses may not be helping new and prospective students understand the realities of online study.

I think a lot of students walk into an online course without really knowing how much they are going to be left to their own devices and, in fact, it's sold to them in that way, "If you work full-time and you have five kids you can do your degree online". (Australian metropolitan university)

The marketing message... the perception that it sometimes creates, that online learning is quite easy and everything's accessible. I think when we're working in the first-in-family, low SES space, there's probably more we could do around creating an understanding of what successful study looks like, how you do it, particularly in those early years. (Australian regional university)

Diagnostic quizzes, surveys and specific conversations, are being used in a number of institutions to help address these expectations and to explore additional preparation that may be needed. For example:

We do ask questions around time commitments, those sorts of things... and we give immediate feedback from the survey with strategies, as well as referring to other university services as well. So we know for a lot of our students they are coming on board with a lot of other commitments, family or otherwise. (Australian metropolitan university)

In some cases, we will say "We think you might need to gain some extra skills before you can study with us". We will encourage them to study in advance, the preparatory materials, and, crucially, to make them aware of the intensity of it and the volume of work that's involved. (Open University UK)



What's next?

With the qualitative data-collection phase of the project now complete, the final stage of the project will be spent on completing the data analysis and collating other relevant data, including evidence from national and international literature, all of which will inform the final report. I am extremely grateful to the 16 institutions and the 150 participants within them, for their time, interest and enthusiasm, which has made this project possible. I look forward to being able to send all of you the final report in the New Year.

Questions or feedback?

Please contact me on cathy.stone@newcastle.edu.au for any questions or feedback. All [past copies](#) of progress updates can be accessed from the NCSEHE website.