### Digital and technological considerations with equity

Literature Review

There is a small body of work in this review that attends explicitly to the digital-technological elements of teaching and learning. This literature examines connections between equity and different technological possibilities, such online distance learning (Willems, 2012; Signor & Moore, 2014), three-dimensional virtual learning environments (Wood & Willems, 2012), and open educational resources (Bossu, Bull & Brown, 2012; Willems & Bossu, 2012). Each of these papers addresses both the possibilities and the challenges that these technological advances have made, in terms of both opening and constraining access and participation for particular groups, such as Indigenous students (Willems, 2012) and students with disabilities (Kent, 2016; Owen et al., 2016). In addition, Horn et al. (2015) make an argument for embedding library services and guidance into a course’s Learning Management System (LMS) so as to harness the affordances of the online pedagogic environment, arguing that, “The development of information literacy is too important to be left to chance encounters with the library – particularly for students at risk. Embedded librarianship, through the LMS, provides an effective means for equitably facilitating these encounters” (p.248).

The literature on digital learning and equity in higher education also investigates factors influencing student engagement in online learning. Muir, Milthorpe, Stone, Dyment, Freeman & Hopwood (2019) explore online student engagement over a whole semester at a regional Australian university. The weekly feedback obtained from 9 students over the semester highlights assessment tasks, unit(s) workload, relevance and lecturer input as key factors influencing student engagement, while other factors mentioned by participants include lecturer presence, work life commitment and nature of units in the course (Muir et al., 2019). The authors therefore advocate the significance of planning, design and teacher presence to successfully engage online learners in higher education, consequently improving their educational outcomes, including their retention and course completion times (Muir et al., 2019). On the other hand, Hockings, Bret & Terentjeves’ (2012) work investigated the infrastructure and interventions effective in ‘developing, embedding and extending inclusive teaching and learning in practice’ (p. 238) in the University of Wolverhampton. The study identified three embedding models of extending the Open Educational Resource for inclusive practice in the University (Hockings et al., 2012). Model 1 involves developing professional values through the Postgraduate Certificate in Academic Practice, where a blended learning approach with an emphasis on the ‘development of professional values through the university’s Postgraduate Certificate in Academic Practice’ will be implemented (Hockings et al., 2012, p. 246). Model 2, on the other hand focuses on flexible resources customized to support local CPD activities and issues (Hockings et al., 2012). The starting point for this model involves embedding teachers’ classroom concerns instead of students’ concerns, resulting in a teacher-led non-confrontational approach which relieved tension, anxiety and cynicism felt by colleagues (Hockings et al., 2012). Model 3 comprises distance learning for (transnational) academic development, and uses the OER LTI module as a ‘full distance learning package’ (Hockings et al., 2012, p. 248), which can be used by colleagues who are unable to attend development opportunities in person (such as Models 1 & 2), or who want to gather evidence to apply for membership of the HEA individually (Hockings et al., 2012). The authors therefore contend that through the development of an inclusive pedagogy, and the building and sharing of understanding and knowledge regarding “complex and often deeply embedded differences in practices, ethnicity, and belief alongside class, locality and gender”, the OER LTI will ‘contribute towards social inclusion’ (p. 250), and help the HE sector “stimulate new forms of representation and participation” (p. 250), consequently encouraging practices of democracy (Hockings et al., 2012).

Summary by Sally Baker and Anna Xavier.

**References**

Bossu, C.; Bull, D.; & Brown, M. (2012). Opening up Down Under: the role of open educational resources in promoting social inclusion in Australia, *Distance Education,*

33(2): 151-164.

Horn, A.; Maddox, A.; Hagel, P.; Currie, M.; & Owen, S. (2013). Embedded Library Services: Beyond Chance Encounters for Students from Low SES Backgrounds, *Australian Academic & Research Libraries*, 44(4): 235-250.

Signor, L. & Moore, C. (2014). Open Access in Higher Education–Strategies for Engaging Diverse Student Cohorts, *Open Praxis,* 6(3): 305-313.

Willems, J. (2012). Educational resilience as a quadripartite responsibility: Indigenous peoples participating in higher education via distance education. *Journal of Open, Flexible and Distance Learning, 16*(1): 14–27.

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**Equity and Higher Education Annotated Bibliography Series**

**Digital and technological dimensions of equity**

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| **Citation** | **Annotation** |
| Bossu, C.; Bull, D.; & Brown, M. (2012). [Opening up Down Under: the role of open educational resources in promoting social inclusion in Australia](https://www.tandfonline.com/doi/abs/10.1080/01587919.2012.692050), *Distance Education,* 33(2): 151-164.  AUS  Annotation by Evonne Irwin  Keywords: *open educational resources; OER in Australia; social inclusion* | **Context:** Looks at the use of OER (Open Educational Resources) in the Australian context via a discussion of Online and Distance Learning and its relationship to the ‘widening participation’ and social inclusion agenda. But despite Australia’s traditional commitment to egalitarianism, it “seems slow” in moves to open up education. Coupled with this, numbers of indigenous and regional and remote students in HE are not growing. The paper gives a number of reasons why this may be including lack of access to fast internet and good hardware rendering OER and OER-like education out of reach. Also discusses the failed impact of enabling programs to “diversify the composition of the national student population at the sector-wide level (James, et al. 2004)” (p. 155). OER has the potential to do this, but institutions are not taking it up.  **Aim:** “…this article explores some of the policies and initiatives that might play significant roles in enabling the purposeful use and redevelopment of OER in Australia. It then reports the findings of an environmental scan of the use of OER across the higher education sector in Australia . . .” (p. 152).  **Methodology:** Analysis of national policy as it relates to OER + a survey of HE institutions + interviews with diverse stakeholders.  **Conclusions:** “. . . the potential of the OER movement is not yet fully understood in Australia.” (p. 160) |
| Devlin, M. & McKay, J. (2016). [Teaching students using technology: Facilitating success for students from low socioeconomic status backgrounds in Australian universities](https://ajet.org.au/index.php/AJET/article/view/2053), *Australasian Journal of Educational Technology,* 32(1),92–106.  AUS  Annotation by Anna Xavier  Keywords (Anna’s): *Low SES; technology; higher education; widening participation* | **Context:** Set within the context of a widening participation agenda adopted by the Australian HE which focuses on disadvantaged students, especially low SES students, highlighting an increasing interest in ways to facilitate the success of these students in HEIs.  **Aim:** To report on the findings from an Australian study (Devlin, Kift, Nelson, Smith & McKay, 2012), which highlighted the ‘use of technology in effectively teaching and supporting students from LSES backgrounds’ as a key theme. RQ of original study: “What works effectively to teach and support LSES students?” (p. 95)  **Theoretical framework:** Conceptual framework: ‘sociocultural incongruence’ (Devlin, 2013) – ‘describes the circumstances in which students from LSES backgrounds attempt to engage with the particular sociocultural discourses, tacit expectations and norms of HE’ (p. 96); Theoretical concepts: ‘constructivism (Bruner, 1996), transition pedagogy (Kift, 2009; Kift & Nelson, 2005), inclusive pedagogy (Waterfield & West, 2006), integrated curriculum design (Hockings, 2010).  **Methodology:** Qualitative approach – focused on success of students (Devlin et al., 2012); Data collection methods: Literature review on experience of LSES students in HE; semi-structured interviews (face-to-face/telephone) (115); environmental scan of effective policy, programs and practice in Australian HE to teach and/or support students from LSES status backgrounds; Participants: LSES students (n=89) who are considered ‘successful’ and are the first generation to attend university in their family; Staff (n=26) who are known for their excellent provision of support and/or teaching LSES background students at university; Research setting: 17/39 Australian universities from Victoria, Queensland, Western Australia, Tasmania, NSW, South Australia and ACT; Sample: universities from the Australian Technology Network, the Group of Eight, dual sector universities, regional universities, unaligned universities & post-Dawkin universities; Data analysis: Thematic analysis.  **Findings:** 1)Broad themes: Important components for facilitating student success – flexibility, variability & choice; 2)Specific finding: Important role of technology in enhancing the HE experience for students from low SES backgrounds (52 comments from students & 13 comments from staff were coded under the sub-theme of teaching with technology); 3) Four principles evident in data: i) ‘Using a range of resources and media’, ii)Facilitating interactive and connected learning, iii)Enabling personalised learning, iv)Assuring high academic standards.  **Discussion:** Implications – 1) Changing role of educators – increasing role of educators as a facilitator: University educators should ‘embrace personalised and collaborative learning alongside didactic methods of teaching’ (p. 101); 2) Need for teaching and support staff to continually review their use of technology to “ensure it is inclusive and that it supports a wide range of learning preferences and individual circumstances” (Devlin et al. 2012, p. 10); 3) Institutional policy makers and leaders should ‘consider the availability of appropriate technology and connectivity for LSES students” as well as “ensuring policy and other decisions do not exclude LSES students from learning and other opportunities” (Devlin et al., 2012, p. 12).; 4) It is important to rethink the role of educators in universities as well as to reward and recognise mechanisms for teaching & to examine the institutional policies which underpin these. Critical questions to consider:   * ‘How should institutions orient and induct new staff into teaching with technology? * What professional development for ongoing enhancement is appropriate? * Where and how should support for staff using technology in learning and teaching be provided? * To what extent should innovation in teaching using technology feature in criteria for awards and   promotion?’ (p. 102)  **Core argument:** Teaching with technology offers LSES students with the flexibility & options needed to access and participate successfully in tertiary education, consequently enhancing their HE experiences and educational outcomes. |
| Dyment, J., Downing, J., Stone, C., Milthorpe, N., Muir, T., Freeman, E. and Hopwood, B. (2019). [*Good Practice in Online Teacher Education*](https://www.ncsehe.edu.au/publications/good-practice-in-online-teacher-education/)*.* Tasmania: NCSEHE.  AUS  Annotation by Anna Xavier  Keywords (Anna’s): *online learning; teacher education; higher education; Australia* | **Context:** Online learning is increasingly becoming the preferred mode of study for Initial Teacher Education (ITE) students in Australia. Between 2007 and 2016, the percentage of ITE students studying online has increased from 15 to 25 per cent (Australian Institute of Teaching and School Leadership (AITSL), 2018). However, although research shows that students who study teaching online are able to achieve similar academic results to their on-campus counterparts, students who study online are observed to have lower rates of retention, success and completion compared to their on-campus peers.  **Aim:** To respond to the increase in online ITE across Australia and the worrying statistics surrounding the lower rates of retention, success and completion of online ITE students, by providing a guideline for teacher educators working in the online avenue.  **Methodology:** Description of guidelines for good practice in ITE. Principles & checklist are derived from a systematic literature review of online ITE-related research, interviews of key ITE educators in Australia and tracking of students experiences in online studying over a number of years  **Discussion:** Guidelines – 1. Know your students; 2. Communicate & manage student expectations; 3. Be present & involved; 4. Create user friendly online learning spaces; 5. Maximise the affordances of the online space; 6. Provide opportunities for students to develop relationships and contribute meaningfully to the online learning environment; 7. Design learning activities that encourage & allow students to engage in multiple ways; 8. Build with flexibility in mind; 9. Ensure assessment tasks are authentic, applied, and constructively aligned with course aims and learning activities; 10. Design to enable digital evidence of developing teacher capabilities (portfolio); 11. Facilitate meaningful connections between university study & their professional contexts and experiences; 12. Monitor and manage large online cohorts effectively; 13. Support students who are struggling or absent; 14. Be prepared to change learning approaches and activities in response to changes in engagement levels during the semester; 15. Farewell students, review, reflect and evaluate at the end of semester; Checklist:     |  |  |  |  | | --- | --- | --- | --- | | Pre semester | Early semester  (Weeks 1 – 3) | Mid semester  (Weeks 4 – 10) | Late semester  (Weeks 11 -13) | | * Am I gathering information about the student cohort to know who my learners will be? * Am I sending a welcome email? Do the students know who I am and a bit about my teaching philosophy? * Have I made the students aware of the expectations of the unit? * In my unit design, have I achieved constructive alignment among learning outcomes, learning activities, and assessment tasks? * Am I ready to launch my unit with the needs of non-traditional online learners in mind so they can progress flexibly at their own pace? | * What steps am I taking to get students to introduce themselves and get to know each other? * Have I responded to or acknowledged every student in early discussion posts? * Are my students aware of general trends in class demographics (e.g., numbers of students enrolled, backgrounds, diversity)? * Have I provided a forum for online students to form study groups or meet in person? * Am I responding in a timely and consistent manner to student emails and discussion posts with questions about the unit? * Have I set up systems to alert me to highly pressing and critically urgent discussion posts? * Have I made direct contact with students who have not yet engaged? | * How am I encouraging students to persist with their engagement? * How am I using learner analytics to monitor engagement and adjust my teaching practices accordingly? * How am I checking in with students whose engagement seems to have declined? Or those students who are not logging in? * How am I rewarding students who engage consistently? * How am I continuing to reach out to students to encourage their engagement? * How am I taking care to maintain my own enthusiasm and self-care? * How am I honouring and acknowledging the fact that student engagement may be focused on assessments during particular weeks, with less time for engagement in other ways? * How am I ensuring I am giving students prompt constructive feedback on their work? And how can I confirm they are engaging with the feedback? Have I explained if I will be less present for a period (due to, for example, a conference)? * How am I using technological affordances to maintain a presence even when I might be away? Have I invited feedback on unit design and adjusted practices accordingly? * How have I diversified my pedagogies and learning practices so there is variety within and across weeks? * How have I confirmed that my learning activities support becoming a teacher? * How have I allowed students time to engage with their assessment tasks? Have I provided opportunity for a synchronous hook up with students? Have I offered timely and comprehensive feedback on assessment tasks? * Am I ensuring that my tutors are meaningfully engaged? | * How am I ensuring I maintain my presence and activity and continuing to support student engagement? * How am I ensuring I support my students to take more responsibility for their learning and allow communities of practice to emerge? * How am I ensuring my learning activities sustain student engagement until assignment and semester completion? * How am I farewelling my students and offering closure on the unit? * How am I taking time to record problems and successes that arose this semester so I can adjust for the next offering? | |
| Gourlay, L. (2014). [Creating Time: students, technologies and temporal practices in higher education,](https://journals.sagepub.com/doi/10.2304/elea.2014.11.2.141) *E-learning and Digital Media,* 11(2), 141–153.  UK  Annotation by Sally Baker | **Context:** Time/ temporalities and learning technology/ digital technologies in higher education; postgraduate students in UK and their day-to-day engagement with digital technologies. Argues that time = “a crucial constitutive dimension of human life, rather than a neutral and unchanging backdrop against which action takes place” (p.141). In research into learning technologies, time is assumed to be a stable and separate element of context, rather than a fluid and processual element  **Theoretical frame:**  **Methodology:** Two-year (funded) project on postgrad students’ daily engagements with technologies. Data collection methods = qualitative interviews, focus groups, student-created multimodal journals  **Findings:** “student entanglements with devices and digitally mediated texts serve to pause, distribute, elongate and render simultaneous the temporal nature of their practices in complex ways which defy typological analysis” (p.142). Findings thematised according to temporal practices: slowness, intrusive technologies, technological/embodied action, making future time, constant entanglements.   * *Slowness*: impact of perceived speed of technologies, causing adaptations in practices * *Overload*: too much literature, texts too long: “The theme of overload (like slowness) seems to have led to a sense of wasted time, impatience, frustration and loss of motivation” (p.147) * *Keeping up*: keeping apace of new tech (anxiety, annoyance that things change) * *Intrusive tech*: constantly ‘plugged in’/ surveillance-like tech (e.g. Facebook), temptation of email * *Tech/Embodied Action*: Where technology appeared to play decisive role in student’s embodied action (interactions between tech and practices; e.g. not going to the physical library until the database has been searched) * *Making future time*: using technology to pause or retain time for later engagement (e.g. echo recordings of lectures)*Constant entanglements*: “Some student comments suggested a strong degree of constant copresence and intimacy with mobile networked devices in particular” (p.150)   **Core argument:** For postgraduate students, “dimension[s] of time is in complex, dynamic and contingent interplay with a range of networked devices and shifting material domains and practices, which are mobilised for textual engagement and production” (abstract). Students appear to experience time and create time through their use of technologies (and waste time) |
| Henry, M. (2018). [*The online student experience: A exploration of first-year university students’ expectations, experiences and outcomes of online education*](https://ro.ecu.edu.au/theses/2059)*.* Retrieved from https://ro.ecu.edu.au/theses/2059  AUS  Annotation by Anna Xavier  Keywords (Anna’s): *online learning; higher education; widening participation* | **Context:** Although online education provides an important opportunity to diversity the student population in HE, the Online Student Experience (OSE) and online student outcomes often remain ambiguous. The authors also argue that a student-centred perspective is often absent from the OE literature, where students’ expectations, perceptions, experiences beyond the curriculum and the role of students’ experiences in the educational outcomes of online students are often given limited consideration.  **Aim:** To offer a ‘rich description of how first-year students at an Australian public university constructed their lived experiences of OE, and attributed meaning to these experiences’ (abstract).  **Theoretical frame:** Constructivist Learning Theory (Lesgold, 2004; Richardson, 2003); Expectation-Confirmation Theory (Bhattacherjee, 2001); Longitudinal-process Model of Drop Out from Distance Education (Kember, 1989).  **Methodology:** Qualitative approach; Phenomenological case study methodology; Data collection method: Online interviews; Participants: First-year students at an Australian public university (n=43); Data analysis: Thematic analysis.  **Findings:** Six themes which describe students’ lived experiences of OE: ‘learner *Motivation*, *Ability*and *Circumstances*; and institutional *Interaction*,*Curriculum*and *Environment*, forming a *Motivation*, *Ability*, *Circumstances*– *Interaction*, *Curriculum*, *Environment*, or *MAC-ICE,*thematic structure of the OSE’ (abstract); Varied student experiences are observed, without a consistent explanation of how all first-year students would experience OE; Each theme was perceived to inform students’ outcomes (via direct contribution to their learning, performance, satisfaction or retention, or by facilitating their experiences conducive to these outcomes’; Interconnection in student outcomes is evident – retention is influenced by students’ academic performance & satisfaction, while satisfaction is impacted by students’ learning & academic performance.  **Discussion:** A quality OSE appears to be ‘highly complex’ (abstract), influenced by a range of experiences related to both learners & their institution; The findings combine a ‘fragmented and piecemeal’ comprehension of OE, and present a ‘holistic & student-centered’ description of a quality OSE.  **Core argument:** A deeper understanding of the OSE is crucial in ensuring the enrolment and retention of a diverse range of students in HE institutions. The findings from the study can enable propositions to clarify and enhance the OE theory, consequently contributing towards improved educational outcomes for online students. |
| Hockings, C.; Brett, P.; & Terentjeves, M. (2012). [Making a difference—inclusive learning and teaching in higher education through open educational resources](https://www.tandfonline.com/doi/abs/10.1080/01587919.2012.692066), *Distance Education,* 33(2), 237–252.  UK  Annotation by Anna Xavier  Keywords: *inclusive pedagogy; open education resources; student diversity; academic development; professional values* | **Context:** Set within the context of a growing concern in the UK HE sector regarding how professional values such as “acknowledging diversity and promoting equality of opportunity” (Higher Education Academy (HEA), 2006, p. 4) are understood and displayed in HE.  **Aim:** To ‘outline how the Learning to Teach Inclusively open educational resource (OER) is addressing this concern by facilitating understanding of the concepts and principles underpinning these professional values’, via ‘a set of principles for inclusive practice and show how they underpin not only the content of this resource, but also its design, development, and embedding’ (p. 237). RQ: ‘What infrastructure and interventions are effective in developing, embedding, and extending inclusive learning and teaching in practice?’ (p. 238)  **Theoretical frame:** Not specified in study.  **Methodology:** Essay.  **Discussion:** 1)Research underpinning the content & design of the OER LTI module – Research team collaborated with teachers in 2 university types across a range of subjects; Data collection methods: Fine-grain analysis of video-recorded classroom sessions; interviews with teachers & students, focus groups, and questionnaires; Key findings: a) Teachers’ pedagogical practice is influenced by their conceptions of knowledge generation in subject communities; b) For some teachers, their espoused views on addressing diversity & actual teaching practices differ; c) ‘Student diversity is multifaceted’ (p. 239); d) When teachers engage diverse groups of students academically, they usually: create safe & inclusive spaces by personally getting to know each students; use strategies which harness the knowledge & experience of students; reflect their own identity, beliefs and assumptions in the preparation and choice of resources, and teaching approach; 2)Inclusive principles underpinning the design of the OER package – a) Open and accessible learning environment; b) Appropriate, accessible and ethically sensitive video production; 3)Exploring ways the OER could be reused for inclusive learning environments – Module was accessed in 114 towns & cities in the UK and in 26 countries (between August 2011 & March 2012); However, evidence indicates that OER is generally underused in HE (Greenbo, Fisher & Thille, 2011; Stacey, 2010); 4) Embedding & extending OER for inclusive practice in the University of Wolverhampton – Three embedding models: Model 1: developing professional values through the Postgraduate Certificate in Academic Practice – blended learning approach with an emphasis on the ‘development of professional values through the university’s Postgraduate Certificate in Academic Practice’ (p. 246); Model 2: flexible resources customized to support local CPD activities and issues – starting point: embedding teachers’ classroom concerns instead of students’ concerns, resulting in a teacher-led non-confrontational approach which relieved tension, anxiety and cynicism felt by colleagues; Model 3: Distance learning for (transnational) academic development: uses the OER LTI module as a ‘full distance learning package’ (p. 248), which can be used by colleagues who are unable to attend development opportunities in person (such as Models 1 & 2), or who want to gather evidence to apply for membership of the HEA individually. 5)Effectiveness of interventions: All three interventions have raised several ‘technical, logistical, political, and cultural’ (p. 249) issues which require negotiation and senior management intervention; evidence suggests that ‘senior management commitment & policy directives play an important role in the wider use and reuse of OER across institutions’ (p. 249); influence of the project team also appears to be a primary factor in ensuring the effectiveness of all three models.  **Core argument:** Through the development of an inclusive pedagogy, and the building and sharing of understanding and knowledge regarding “complex and often deeply embedded differences in practices, ethnicity, and belief alongside class, locality and gender”, the OER LTI will ‘contribute towards social inclusion’ (p. 250), and help the HE sector “stimulate new forms of representation and participation”, consequently encouraging practices of democracy (Economic and Social Research Council, 2009, p. 50). |
| Horn, A.; Maddox, A.; Hagel, P.; Currie, M.; & Owen, S. (2013). [Embedded Library Services: Beyond Chance Encounters for Students from Low SES Backgrounds](https://www.tandfonline.com/doi/full/10.1080/00048623.2013.862149), *Australian Academic & Research Libraries*, 44(4), 235–250.  AUS  Annotation by Sally Baker  *Keywords: student outcomes; socio-economic status; learning management system; embedded librarianship; teaching partnerships; evaluation* | **Context:** Set in post-Bradley Australian higher education context (targets for expansion; greater attention to experiences of non-traditional/ equity students. Looks specifically at students’ experiences of library services. Discussion of measurement of SES; adopts postcode method. Scopes literature on low SES students; discusses barriers, cultural mismatch. Draws on literature that argues best site for integration help = curriculum and argues that a similar argument can be made about library support [but: LMS and curriculum are not the same thing]. Discusses issues with LMSs (potential to hide library information / make less visible); discusses increase of online students  **Aims:** Examines impact of embedding library services into LMS on experience of low SES students  **Theoretical frame:**  **Methodology:** Mixed methods: surveys with students (Year 2, UG health studies) and interviews with library and academic staff. Most students = female; participants = online and on campus; 67% = alternative pathways/ ‘non-traditional’; 25% = low SES. Surveys = evaluation of embedding library information/ support into course LMS = conducted start/end of course. Survey 1: n=17; Survey 2: n=23  **Findings:** Data suggests that students felt more confident/ aware of/ satisfied with library services (easier to use/ easier to find) – measured between start and end of course. Decline in not being aware of additional services. Level of confidence in using eBooks = remained same  Staff perceptions = better visibility of materials and services and conversations with students about information literacy. Library staff benefitted from strengthened relationships with academic staff. Based on success of evaluation, whole of institution roll out of embedding library services within LMS **Core argument:** In on online form, libraries and their services can become less visible; “The development of information literacy is too important to be left to chance encounters with the library – particularly for students at risk. Embedded librarianship, through the LMS, provides an effective means for equitably facilitating these encounters” (p.248). |
| Muir,T., Milthorpe, N., Stone, C., Dyment, J., Freeman, E. & Hopwood, B. (2019).  [Chronicling engagement: students’ experience of online learning over time](https://www.tandfonline.com/doi/abs/10.1080/01587919.2019.1600367?scroll=top&needAccess=true&journalCode=cdie20), *Distance Education*, 40(2), 262–277.  AUS  Annotation by Anna Xavier  Keywords: *Engagement; online teacher education; flexibility; online education; mature-age students* | **Context:** Despite extensive research into student engagement in online learning, most research investigates the student experience through surveys administered at a fixed point in time, usually at the exit point of a single unit of study or course.  **Aim:** To explore and describe online student engagement over a whole semester, by presenting on results from the weekly feedback on online education students’ engagement at a regional Australian university. The study is guided by two overarching questions: i) What factors impact students’ engagement over a semester? Ii)What factors account for fluctuation in engagement levels over time?  **Theoretical frame:** Not specified in study.  **Methodology:** Interpretive qualitative approach; Prospective longitudinal method (Cohen et al., 2011); Data collection methods: Online questionnaire (weekly, administered via SurveyMonkey); Semi-structured interviews (8 interviews with each student – 1 pre-semester; 6 fortnightly during semester; 1 post-semester); Participants: Third or fourth year students from the School of Education at a regional Australian university (n=9); Sampling strategy: Purposeful sampling (Creswell, 2012); Data analysis: Thematic analysis (with inductive & deductive coding).  **Findings:** 1)Students’ engagement levels – Lowest levels of engagement recorded in Week 1 (2 students were equally engaged in all units, 5 responded negatively); Second lowest levels of engagement recorded in Weeks 4,5,7,8,9 (level 6); Highest levels of engagement recorded in Weeks 2 & 6 (both weeks followed a break); 2)Factors influencing engagement: Primary factors – assessment tasks (12 comments), unit/s workload (4), relevance (2), lecturer input (1); Other factors – lecturer presence; work/life commitments; nature of units; 3)Case study – Angela: Self-identified as ‘proactive & a high achiever’ (p. 269); Completed 5 surveys (Weeks 1,3,5,6,9); Manages part-time study & work at the school education sector; Report – Week 1: Engagement level of 0; Week 6: Engagement level of 8; Week 9: Engagement level of 6; First interview (pre-semester) – Discussed increased workload for upcoming semester (2 instead of 3 units), acknowledged need for increased self-discipline as an online student “the onus is a great deal more on you to be responsible” (p. 270), view learning as a “reciprocal relationship” (p. 270) and appreciated good planning for online learning by the teaching staff member; Second interview (Week 2) – “overwhelmed” by increased study load (p. 270); key theme: teacher presence & behaviour; engagement was encouraged by “catchy, interactive” (p.270) and hands-on learning activities; theory-based reading was difficult; discussion boards were perceived as “superficial”, and not “thought provoking” (p. 270); Third interview (Week 4) – Angela’s attention was ‘unbalanced’ (p. 271) due to varying workloads in different units; key theme – readings (study schedule dominated by “long, laborious readings”, but were disengaging, especially if using technical “jargon”) (p. 271); Fourth interview (Week 6) – more “anxious”, frequent comments on ‘asynchronous flexibility’ with value placed on ‘freedom to move at own pace’ and to “zoom ahead” or take study breaks when needed (p. 271); Sixth & seventh interviews (Weeks 9 & 11) – dwelled on issue of ‘asynchronous flexibility’- ability to ‘fit study around life commitments’ and the frustrations that arise when not able to do so; Post-semester interview – Summary of key points of discussion: Ambivalence on discussion boards, importance of having materials & content available from the beginning of the semester; dissatisfaction with temporal restraints, considered as her ‘biggest gripe’ (p. 272).  **Core argument:** Results from the study offers an important reminder on the significance of ‘planning, design & teacher presence’ to successfully engage the online learner, consequently improving educational outcomes for online students, including their retention and completion times.  **Recommendations:** 1) Providing full access to learning materials from the start of the semester; 2) Clearly map & logically sequence units; 3) Lecturers & instructors should regularly respond to all students at least once a week; 4) Avoid imposing a time-limit on compulsory activities. |
| Signor, L. & Moore, C. (2014). [Open Access in Higher Education–Strategies for Engaging Diverse Student Cohorts](https://openpraxis.org/index.php/OpenPraxis/article/view/132), *Open Praxis,* 6(3), 305–313.  AUS  Annotation by Sally Baker  Keywords: *Diversity; e-Learning; higher education; learning design; mature age; open access* | **Context:** Discusses growth in online learning to suit diverse groups of learners (increased diversity). Presents case study of online program offered by Swinburne that employs informed learning design. The case study = open access – UG information systems program – attracts mature age student. Authors claim the program has an ‘innovative pedagogy’ which encourages students to remain connected via active learning and tailored assessments. Program = offered in partnership with OUA. The program “supports workers who either desire to credential existing work-based experience or are looking to enhance their career and employability prospects” (p.306)  **Theoretical frame:** None  **Methodology:** Description of program  **Discussion of program:** Learner engagement = key; has developed bank of learning objects that “caters for different learning requirements” and offers support for ‘equity’ by providing materials in different formats (virtual lectures, transcripts, videos) and students can access them at their own pace. Learning objects make the program more individualised, offered as “smaller, self-contained, portable or reusable units of learning presented in manageable segments” (p.307).  Effective protocols established for timely feedback to prevent students from feeling isolated/ disengaged. Communicative mechanisms include asynchronous online discussion boards, synchronous chats,  Active learning in assessments: based on real-life cases/scenarios (so as not to exclude people who are not working, and they build on previous assessments. Tutors offer inclusive formative feedback, such as audio feedback (which also helps to build rapport) |
| Stone, C. (2016). [Opportunity Through Online Learning: Improving Student Access, Participation and Success in Higher Education. Executive Summary.](https://www.ncsehe.edu.au/publications/opportunity-online-learning-improving-student-access-participation-success-higher-education/) Newcastle: NCSEHE.  AUS  Annotation by Anna Xavier  Keywords (Anna’s): *online learning; widening participation; student outcomes; higher education* | **Context:** Set within the context where non-traditional students (low SES backgrounds, students with disability, regional & remote students, Indigenous students & FinF students) are highly represented in online undergraduate programs. However, authors content that the retention & completion rates of online education for distance students are ‘considerably lower’ (p. 2) than students enrolled on-campus.  **Aim:** To explore ways to improve student outcomes in undergraduate online education.  **Methodology:** Qualitative approach; Data collection method: interviews; Participants: Members of academic & professional staff (n=151) across 16 HE institutions (15 in Australia & Open University (OU) united Kingdom (UK))  **Findings:** 1) Need for a ‘strategic, whole-of-institution’ approach which recognises online education as ‘core business’; 2) Crucial need for early intervention to enable students to ‘connect, prepare & engage’; 3)Vital role of ‘teacher-presence’ in developing a sense of inclusion in the learning community, consequently improving retention rate of students; 4)Need for tailoring content, curriculum and delivery for online learning; 5) Importance of regular and structured contact between students and the institution to ensure the provision of connection & direction in students’ trajectories; 6) Importance of learning analytics in informing relevant & appropriate student interventions; 7)Necessity for collaboration across the institution to integrate & embed support, which can be offered to students when needed (p.2).  **Recommendations:** 10 National Guidelines for Improving Student Outcomes in Online Learning – 1.Know who students are; 2. Develop, implement and regularly review institution-wide quality standards for online education delivery; 3. Intervene early to address expectations of students, and build skills & engagement; 4. Explicitly value & support the vital role of ‘teacher-presence’; 5)Design for online; 6)Engage & support via content & delivery; 7)Build collaboration across campus to offer holistic, integrated & embedded student support; 8. Contact & communicate through students’ journeys; 9. Use learning analytics to target and personalise interventions for students; 10. Invest in online education to ensure access & opportunity. |
| Willems, J. (2012). [Educational resilience as a quadripartite responsibility: Indigenous peoples participating in higher education via distance education](https://pdfs.semanticscholar.org/5aad/f3ed5769240633855141ce0943cf2e42e5e3.pdf), *Journal of Open, Flexible and Distance Learning,* 16(1), 14–27.  AUS  Annotation by Sally Baker  Keywords:*educational resilience; attrition; distance education; higher education; holistic approach; indigenous peoples; connectedness* | **Context:** Proposes a 4-part model of educational resilience as the shared responsibility of students, educators, institutions and communities to promote resilience/persistence and prevent attrition, specifically with indigenous online/distance students. Offers critique of educational resilience: “Framing resilience in terms of either a personal attribute or deficit without considering the context and communities within which that distance learner is embedded is flawed, as an individual’s responses cannot be dissociated from the context within which they are located” (p.14). Compares non-indigenous people to indigenous (90% of non-ind = live on coast = 2.2% of Australiasian continent, compared with the 90% of Indigenous Australians who live in 23% of the continent = rural/remote areas). Author scopes literature that unpacks the multiple disadvantages that Indigenous people face in higher education. Discussion of ‘block mode’ (33% of Indigenous students enrolled in this mode) = mixed-mode (part online, part intensive residential on-campus) – however, other research has noted that there are issues at play with this mode in terms of access to IT and internet, lack of tech support, lack of confidence (e.g Reedy, 2011). Scopes emergence of resilience discourse in education – notes that it is often used to indicate individual attributes and is thus vulnerable to deficit views. Indigenous distance learners = doubly ‘at risk’  **Aim:** To develop a “holistic framework [that] addresses the question of how capacity can be built for the educational resilience of indigenous students participating in flexible, distance, online, or blended formal education” (p.18)  **Theoretical frame:** Resilience as social/community concept (resisting individualised approach)  **Methodology:** Offers case study of ‘Denise’ – aboriginal, UG health, block mode, lives in remote NSW, single, mature age, low SES, left school after Year 10, FinF/ FinComm (part of earlier research project which included 35 online learners)  **Findings:** Barriers to participation for students like Denise = “overcoming low educational attainment and accompanying academic literacy and information literacy skills, access, costs, being the first in the family to participate in higher education, and social isolation” (p.19). Issues for educators: “include connectedness, providing timely communications, flexibility, considerations in the learning design (including learning styles), and scaffolding the necessary skills” (p.20). Connectedness = particularly important for Indigenous people. Also need to consider literacies, practices and knowledges that cannot be assumed – one ‘invisible fence’ (O’Rourke, 2008) = English language. Multiple, culturally sensitive and explicit (easy to find online) forms of support need to be on offer. Also, staff- student ratio needs to be considered.  Community in quadripartite model = peers, sociocultural and local community **Core argument:** “Educational resilience—successful participation, retention, and outcomes in distance higher education in spite of any adversity, equity issues, or ‘invisible fences’ distance learners face—is a key consideration in any education sector” (p.22). A 4-part framework of resilience “may also contribute to consideration of building capacity across all stakeholder groups and/or provide the basis for further applied research” (p.23) |
| Willems, J. & Bossu, C. (2012). [Equity considerations for open educational resources in the glocalization of education](https://www.tandfonline.com/doi/abs/10.1080/01587919.2012.692051), *Distance Education,* 33(2), 185–199.  AUS  Annotated by Sally Baker  Keywords: *education; equity; e-inclusion; open educational resources* | **Context:** Equity in context of open educational resources (OERs) in distance education/ context of glocalisation. OERs offer benefits and challenges in terms of opening access (focus on both first/third world countries). Discusses distance education at the levels of localisation, globalisation and glocalisation (“relates to the interplay between local–regional–global interactions”, p.186) – made possible by rapid technological growth/ development and global change. Discusses distance education in context of social exclusion/ e-inclusion – reference to ‘digital divide’ (“involuntary exclusion from the technology society” attributed to Kaplan, 2005 on p.187) – but = multiple divides. Notes the concept of ‘e-inclusion’ (see p.188).  **Aim:** To examine “the potential of OER to overcome issues surrounding educational equity (encompassing access, participation, and outcomes) and social inclusion in the context of the glocalization of formal education” (p.185)  **Methodology:** Discussion/essay  **Findings:** OERs = developed out of limitations of learning portals and legitimised by issuing of licences. Points to many benefits of OERs to teachers and learners “they are accessible; provide learners with flexibility to study anywhere and anytime; at no or low costs; and have the potential to contribute to informal, non-formal, and formal education” (p.190).  Challenges (viewed through equity lens): not all OERs are developed/ designed with access and equity in mind or for a diverse student body. There may be issues with the language of instruction (limited recognition of linguistic diversity = particularly problematic for global access), issues related to context and local assumptions, and issues related to technology and rurality. There may also be challenges at the level of people not understanding the project or not wanting to share resources + intellectual property and copyright issues. ‘Quality’ = also problematic **Core argument:** OERs hold great potential to address equity/ access issues but there are challenges that need to be considered. |
| Wood, D. & Willems, J. (2012). [Responding to the widening participation agenda through improved access to and within 3D virtual learning environments,](https://ajet.org.au/index.php/AJET/article/view/845) *Australasian Journal of Educational Technology,* 28(3), 459–479.  AUS  Annotated by Sally Baker  Keywords: *disabilities, higher education, access, equity, widening participation* | **Context:** Examines how three dimensional virtual learning environments (3DVLEs) can impact on equity/ social inclusion agenda, particularly for students with disabilities. ALTC-funded research. 3DVLE = “a game-like environment that offers the potential for increased flexibility, enhanced collaborative opportunities and a safe environment for experiential learning activities” (p.460). Cites Willems (2010) = equity is “a multidimensional phenomenon”, leading to ‘equity sub-groups’: “Through equity overlap and the interplay of equity subgroups, a  social gradient of educational disadvantage is formed” (p.461). Also, notes the imperative to adapt teaching and learning strategies for increasingly diverse student population. Makes case that flexible learning methods can help expand options available to students  **Aim:** To present findings from research which explores how 3DVLEs can support the WP agenda; to highlight the accessibility limitations and explores suggestions for improving access (especially for SwD) + teaching strategies  **Theoretical frame:**  **Methodology:** Research reported on = 2-part participatory study. First stage involved participatory design, development of accessible, open source 3DVLE and guidelines for improving access for SwD. Second stage = ethnographic research (n= 11 participant-users; 8 with disabilities; 3 = 3DVLE experts without disabilities in real lives)  **Findings:**  *Possibilities for 3DVLEs & access*  3DVLEs can open access for some (students with psychiatric, emotional and learning disabilities, e.g. aspergers through ‘Second Life’) but limit access for others. Limitations include issues with login screen for visually impaired users/ chat window and user interface = not accessible to screen reading technology and others, see p.465). Only 1 participant viewed Second Life as meeting accessibility guidelines; half considered it as not fully accessible for users with disabilities. Makes suggestions for changes (highly technological; see p.466-71).  *Possibilities for 3DVLEs & participation*  Major benefit of using such learning technologies = use of wide variety of media and meet different learning styles by adapting content and allowing time for reflection. Notes suggested strategies and users’ responses (such as providing notecard descriptions and conducting sessions in text chat; see p.472).  Participants considered the following important:   * the ability to change the size and colour of text * the availability of customisable interface skins * the supplying of notecard descriptions * the conducting of sessions in text chat and voice * the provision of transcriptions for voice and audio   Participants suggested dedicated mentor-in-world to aid participation, diminishing distractions in virtual space, allowing sufficient time, and providing voice and text-based descriptions of content. Also, could offer orientation to 3DVLE  *Possibilities for 3DVLEs & improving learning outcomes*  Notes multiplicity of what constitutes outcomes (not just final success, also incremental successes and completion of program-specific reqs such as work placements)  **Core argument:** 3DVLEs can facilitate access and participation, provided that particular provisions are made to enhance accessibility for people with various disabilities/ impediments to learning |