

Employment-driven Online Student Attrition and the Assessment Policy Divide: An Australian Open-access Higher Education Perspective

Catherine Moore, University of Liverpool Steven Greenland, Charles Darwin University

Abstract

Two hundred and twenty-six qualitative interviews with students studying at Australia's largest online tertiary education organisation, Open Universities Australia (OUA), found that failure to complete assessments due to unexpected and unavoidable employment commitments was the standout reason for dropping out of its open-access courses. The assessment policies of 10 Australian universities that teach the OUA tertiary programmes were then reviewed to evaluate the extent to which employment-related circumstances were considered to be grounds for granting concessions and extensions. Half of these institutions' policies did not mention employment as an extenuating circumstance, others made only passing reference, and one specifically stated that work was not a valid reason for an assignment extension. In this regard, online students may not be receiving the flexible and accessible learning that online education is purported to provide. This situation highlights a broader issue, in that many online educators are using policies and protocols that are designed for traditional on-campus students without adequate adaptation for the online learner. Considerable scope therefore exists for improving online learner satisfaction and retention by more effectively accommodating online student characteristics and needs.

Keywords: student retention; policy; student drop-out; online learning; non-traditional students

Introduction

The differences between online and on-campus students have been widely researched and reported in the literature (e.g., Lim, Morris, & Kupritz, 2007; Liu, 2007; Rovai & Jordan, 2004; Summers, Waigandt, & Whittaker, 2005). One important difference relates to demographic characteristics (Palmer, 2012). While many on-campus students are school leavers, online learners tend to be older and have greater time pressures from family and work responsibilities. A consequence of this difference is reflected in rates of student drop-out. As observed by Sener and Hawkins (2007) in the United States, and by others elsewhere (e.g., Maathuis-Smith et al., 2010) online courses frequently experience significantly higher levels of drop-out than their on-campus counterparts.

The high rate of online student attrition is particularly challenging for online educators. For example, attrition rates exceeding 20% have been observed across Australian open-access online degree units (Greenland & Moore, 2014). This percentage represents a substantial revenue loss. High levels of attrition also present challenges for resource planning, particularly with larger student cohorts, where substantial drop-out necessitates the reallocation of teaching resources. This, in turn, often creates disatisfaction among casual or contract teaching staff. A further issue relates to the practice of using student completion figures to evaluate institutional performance

(Maathuis-Smith et al., 2010). As illustration, the Australian Government published completion rates for Australian universities on 17 January 2017 (Department of Education and Training, 2017). These figures were then taken as quasi education quality indicators and immediately reported in the media (e.g., Martin & Fox-Koob, 2017). However, these media articles did not acknowledge the institutions' student demographic profiles, or the implications of these profiles for completion statistics. The media therefore presented a distorted perspective and negative publicity for those institutions that have greater numbers of non-traditional students. In reply, these institutions responded with their own media releases (e.g., "Unis Australia Calls for Perspective on Completion Rates", 2017), which explained that lower completion rates are characteristic of part-time, mature age, distance education students.

Understanding why more students drop out of online learning is essential to inform effective retention strategy (Simpson, 2013) and considerable research has sought to achieve this. Much of the past research has focused on improving online pedagogy and student engagement. Studies include Stacey's (2002) research into constructivist online learning environments; Browne's (2003) cooperative learning model; Gabriel's (2004) exploration into the benefits of online student interactions; Xie, Debacker, and Ferguson's (2006) study, which unpacked student motivation and participation in online learning; Powell, Tindal, and Millwood's (2008) study into personalisation of the online learning experience; and Dearnley and Matthew's (2007) investigation of the factors that contribute to study skill development. Safford and Stinton (2016) summarise other key contextual characteristics of online students that affect dropouts, including level of information and communications technology (ICT) skills; ICT resource availability; isolation, anxiety, and cognitive overload factors. Taipjutorus, Hansen, and Brown (2012) also considered learner confidence in their own study ability to be an important factor in determining online study success.

Despite the considerable research on retention, the main drivers of online student attrition are still not fully appreciated, and further investigation is required (Burns, 2013; O'Shea, Stone, & Delahunty, 2015). Also, while online and on-campus learner differences are widely acknowledged, many online programmes have been developed by simply adapting existing traditional on-campus programmes (Waugh & Su-Searle, 2014). In this regard, online educators might not be providing the online learner with the flexibility they promise. However, evaluating the extent to which learning flexibility is provided to online students is challenging. As Forsyth, Pizzica, Laxton, and Mahony (2010, p. 25) noted: "In the institutions that identify their mission within more traditional boundaries, such as campus-focused universities, it is more difficult to evaluate the institutional capacity for flexibility beyond the eLearning strategy". Interestingly, the design of policies and procedures for online degrees has received limited research attention. An additional worthwhile avenue of investigation therefore concerns the design of online programme policies and the extent to which these accommodate and provide flexibility in relation to the specific needs and characteristics of online students.

This study contributes by identifying the main driver of online student attrition in an Australian open-access education context. Institutional programme protocol is then evaluated to assess the extent to which related policies accommodate the main attrition driver. In this manner it should be possible to expose policy dimensions that do not match online student needs and to then recommend modifications for improving study flexibility and retention.

Research context

This study investigates student attrition and policy in Open Universities Australia (OUA), the largest online Australian tertiary educator. Open Universities Australia has more than 126,000 annual unit enrolments and more than 45,000 online students, 68% of whom are over 30 years

old (Open Universities Australia, 2016). The research findings should therefore be of interest to the broader online education community that caters for similar non-traditional students.

Open Universities Australia schedules four 13-week study periods each academic year. The OUA degree programmes are taught by 10 Australian universities, which are referred to as providers. As accrediting institutions, these providers impose their own policies for their units and degrees. In this regard OUA is a very different higher education entity from the self-accrediting Open University in the United Kingdom. The units making up OUA degree programmes are frequently taught by several institutions, with agreements relating to exemptions, credits, and recognition of prior learning. Therefore, while each provider delivers accredited degrees, they frequently do not deliver all the units in the programme, but rather core units and enough units to validate a student's award.

The majority of the online units offered via OUA were developed from the provider institutions' pre-existing on-campus programmes. However, unlike their on-campus counterparts, students enrolling on OUA units do not have to sign up for a whole programme and are permitted to (and often do) enrol on individual units. Furthermore, students may withdraw by a pre-census withdrawal deadline (usually around week three) without financial or academic penalty. In this regard OUA is considered to be an open-access educator and its students have the flexibility and freedom to try units without committing to a full degree.

Methodology and findings

This research comprised two phases. First, in-depth interviews were conducted with students to identify the main reasons for dropping out of an OUA unit during the previous study period. The second research phase involved identifying and evaluating the policies of the 10 OUA provider universities to assess the extent to which they accommodated the main driver of attrition identified in Phase 1.

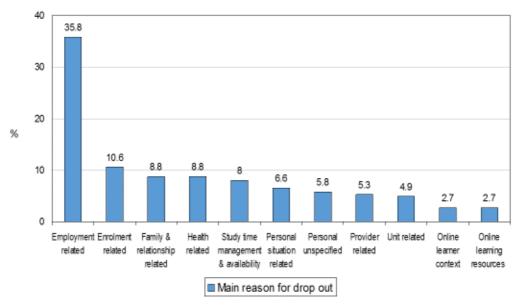
Phase 1: In-depth interviews with online student drop-outs

While some previous researchers have used quantitative approaches to investigate online student attrition (e.g., Holder, 2007; Lee, Choi, & Kim 2013; Yasmin, 2013), others (e.g., O'Shea et al., 2015) have stressed the need for further qualitative investigation to provide more detailed insights. Two hundred and twenty-six telephone in-depth interviews, spread across the four annual study periods, were conducted with students who had recently withdrawn from a unit delivered by one of OUA's main providers. For this purpose a random sample of students who dropped out of a unit during the previous study period was compiled. Research ethics approval was gained for the project and interviews adhered to strict guidelines for telephone interviewing (National Health and Medical Research Council, 2015). An open-ended interview schedule was used to probe the broad array of reasons that had influenced student drop-out, with a particular focus on identifying the single most important driving factor. The conversations were recorded and verbatim transcripts produced. These were then analysed using thematic content analysis (Braun & Clarke, 2014).

Phase 1 findings

The in-depth interviews enabled a diverse set of attrition drivers to be identified. Figure 1 shows that employment accounted for 35.8% of drop-outs and was by far the most frequently given main reason. During the previous study period many employed students had experienced unanticipated work challenges, which necessitated additional effort and took priority over their studies. These challenges related to increased workload demands due to changing work roles, covering for other staff, increased responsibilities, promotion, work-related travel, and starting a new job. The main consequence of the unanticipated work challenges was that students were

unable to overcome assessment hurdles. This manifested in failure to submit assignments on time and/or an inability to sit exams.



Base: 226 respondents

Fig. 1 The main reasons given by online students for dropping out

Although the purpose of the first research phase was to identify the most important driver of student drop-out, Fig. 1 reveals a range of other attrition factors. The next most frequently mentioned reasons for dropping out were enrolment dimensions relating to the open-access nature of the OUA programme. Because OUA permits students to trial online units without financial or academic penalty as long as they withdraw by the pre-census deadline, many students enrolled to see what a unit was like before deciding whether to continue. The greater flexibility offered by online studies compared with on-campus courses, and the exploratory nature of online student enrolment, has also been noted as an attrition driver in other research (Boston, Ice, & Burgess, 2012).

Family commitments, health, and personal reasons, also had a significant combined effect on drop-out. Collectively, these personal aspects accounted for 29% of the main reasons given for withdrawing from online studies. The remaining reasons related to characteristics of the institution, the programme, and the individual unit.

Phase 2: Online programme policy reviews

The objective of Phase 1 was to identify the main reason for drop-out, so that Phase 2 of the research could evaluate the extent to which institutional policies accommodate this key driver of attrition. Phase 1 identified unanticipated, challenging employment situations as the most important driver of online student drop-out. Because the main consequence was that these working students were unable to complete their assignments on time and/or sit the exam, Phase 2 investigated whether the assessment policies of the 10 OUA providers recognised employment as grounds for granting concessions and extensions.

The relevant assessment policy documents were located on each provider institution's public webpage, and accessed through links on the OUA website. Once the policies were identified, they were manually reviewed using textual analysis (Mueller, 2015), and explored using search terms such as assessment, policy, procedure, extension, concession, and extenuating circumstance. Using this method, the protocol for granting assessment concessions and extenuating circumstances for online students on the grounds of employment commitments was identified. Any details that indicated the provider did not recognise employment were also captured.

Phase 2 findings

The assessment policy analysis revealed that all the OUA higher education providers consider traditional extenuating circumstances, such as medical issues and bereavement, to be grounds for granting flexibility and concessions. However, the recognition of employment was variable across providers. Table 1 presents a synopsis of the OUA providers' assessment policies in relation to their specific acknowledgement (or otherwise) of online student employment issues as grounds for granting assignment extensions and concessions.

Table 1 Summary of the assessment policies of the 10 OUA tertiary education providers in relation to provision of employment related concessions

OUA provider	Employment mentioned as an extenuating circumstance for assessment extension/concession	Example of policy detail for granting assessment extension/concession
1	Yes	"Work-related circumstances based on written evidence by his/her employer"
2	Yes	"Unavoidable and unexpected work commitments (e.g. relocation, changes to fly-in-fly-out schedules)"
3	Yes	"Unavoidable work commitments"
4	Yes	"Unavoidable employment known in advance"
5	Yes	"Employment related circumstances that are beyond the student's control"
6	No	No mention of employment - extensions may be given at the convenor's discretion
7	No	No clear statement regarding grounds for granting extensions
8	No	" being busy with other work is not a valid reason for an extension"
9	No	No mention of employment, but "extraordinary causes" considered at the convenor's discretion
10	No	No mention of employment — extensions may be given at the convenor's discretion

In Table 1 the 10 OUA education provider institutions have been anonymised and are presented no particular order. As illustrated, five OUA providers did at least acknowledge the challenges students face in relation to work commitments and indicated that unavoidable work commitments may be considered at the unit convenor's discretion. However, the specific details regarding

_

¹ Based on assessment policy documents from: Charles Darwin University (2016), Curtin University (2015), Griffith University (2016), La Trobe University (2016), Macquarie University (2016), Murdoch Institute of Technology (2015), Royal Melbourne Institute of Technology (2016), Swinburne University of Technology (2014), University of New England (2016), University of South Australia (2016)

exactly what these work-related commitments might be were lacking. Only one institution gave an example of employment scenarios that would be considered:

... relocation and changes to fly-in-fly-out schedules ... [Provider 2]

Another institution had a caveat that required students to let their employment situation be known in advance of any assessment deadline if they were to be eligible for consideration in this regard. The other five providers made no specific mention of employment as an extenuating circumstance. One institution even stated, in relation to its online/blended programmes and assignment concession, that:

... being busy with other work is not a valid reason for an extension [Provider 8]

Discussion

The rising demand for higher education from non-traditional, working students (Bradley et al., 2008) has driven the huge global growth in online learning. However, this growth has been accompanied by very high levels of online student attrition—even a small reduction in these numbers could therefore have substantial consequences for online programme profitability. Reducing online student drop-out rates would also help institutions to overcome the associated resource planning issues and negative perceptions of education quality. Research that investigates the drivers of online student attrition and identifies ways to overcome them should therefore be a priority.

In this study, 35.8% of students withdrew from Australian open-access online units as a result of changing work commitments. This finding contrasts with some earlier studies of online student drop-out that focused on attrition factors relating to pedagogy and engagement (e.g., Stacey, 2002), and other online learner contexts (e.g. see Safford & Stinton, 2016). The specific employment challenges that caused the majority of online student drop-outs related to unanticipated increased workload demands (covering for colleagues who were sick or on leave), increased responsibilities and changing work roles, promotion, work-related travel, and new jobs. For most of these students, increased employment demands presented a temporary challenge that frequently required greater cognitive load and adjustment. While they were still interested in achieving their online study goals, jobs took priority over studies when students were subjected to increased work pressures. As a result, online students were unable to complete assessment hurdles in accordance with assignment deadlines or scheduled exams. They then had to wait for the next iteration of a unit, usually in the following year. As observed in other research (e.g., Waugh & Su-Searle, 2014), the resulting time away from the virtual classroom had a significant negative effect on study momentum and progression. Some students found it difficult to get back into studying and subsequently failed to return and complete their studies.

Online students don't fit the traditional classroom teaching scenario (Business Credit, 2010) and require greater flexibility in their studies (Bradley et al., 2008). Online education is frequently advertised as offering the best option for up-skilling (Merriman, 2006) by providing learners with greater convenience and flexibility (Ware, 2014). Given that employment challenges are the major cause of online student attrition, it might be anticipated that policies would provide learner flexibility in this regard. By analysing publicly available assessment policy documents, the second phase of this research evaluated whether any flexibility was, in fact, offered as a concession for students' employment circumstances.

This research suggests that current online higher education policies may fail to acknowledge important fundamental differences between on-campus and online students. The review of the assessment protocol of the OUA tertiary education providers revealed that policies focused on providing concessions for medical and personal circumstances, which are the main issues that

challenge more traditional on-campus students. However, there was no clear or consistent protocol for accommodating online students' work-related issues, with much of the responsibility for granting extensions and concessions falling to the discretion of unit coordinators. While some providers mentioned employment as grounds for an extension or concession, only one gave specific details of the aspects of employment that would be considered. Other providers made no explicit mention of employment, with one provider even indicating that work was an invalid reason for not completing assignments.

Conclusion

Unexpected employment challenges are the biggest driver of online student drop-out in the context of Australian open-access higher education. Although flexibility is offered to OUA students in terms of study location, asynchronous learning activities, choice of teaching provider, study progression, and the number of units chosen, there was a lack of flexibility in relation to accommodating student employment challenges. Inconsistent and vague policies for granting employment-related assessment extensions and concessions were found among the OUA teaching provider institutions. The lack of consideration given to employment suggests that some institutions have merely adopted on-campus policies without adequate adaptation to online students' needs—an observation that is consistent with research findings from other online education contexts (e.g., Waugh & Su-Searle, 2014). Adjusting online assessment policies and making them more flexible to accommodate students' employment challenges therefore offers scope for improving online student retention.

Online students' work-related commitments should be overtly considered in assessment policies. Other considerations include designing assessments that align more closely with workplace challenges, providing greater choice of assessment options, and offering flexible assignment submission deadlines. In this manner, online educators can overcome, or at least ameliorate, the biggest driver of online student attrition and have a positive effect on student retention.

Further research is required into the feasibility of offering online students greater flexibility. One dichotomy for institutions relates to the desire to be seen to be fair, by treating on-campus and online students equally. Some institutions, for example, appear to be firmer than others in imposing their traditional policies on online students. Another potential challenge relates to granting assessment extensions and more flexible deadlines, strategies that potentially create resource planning issues because teaching staff are required to mark assessments and process grades over a longer period, particularly if deadlines extend beyond the scheduled study period. Regardless of the challenges posed by offering flexible assessment policies, at the very least institutions could better manage online student expectations by clearly communicating exactly what, if any, flexibility is offered in relation to their employment.

A limitation of this study is that it focused on online student attrition and assessment policy in an Australian open-access education context. However, the gap identified between student employment challenges and associated assessment policies should be of interest to the broader online education community. Future research might therefore adopt a similar approach for investigating other online education contexts.

Another limitation is that this study was student focused. Subsequent research might also consider the provision of greater learner flexibility from the teacher and institutional perspectives.

References

- Boston, W., Ice, P. & Burgess, M. (2012). Assessing student retention in online learning environments: A longitudinal study. *Online Journal of Distance Learning Administration*, 15(2), 1–6.
- Bradley, D., Noonan, P., Nugent, H., & Scales, B. (2008). *Review of Australian higher education: Final report*. Canberra: Australian Government.
- Braun, V., & Clarke, V. (2014). What can 'thematic analysis' offer health and wellbeing researchers? *International Journal of Qualitative Studies on Health and Wellbeing*, 9, 26152.
- Browne, E. (2003). Conversations in cyberspace: A study of online learning. *Open Learning: The Journal of Open, Distance and e-Learning, 18*(3), 245–259.
- Burns, M. (2013). Staying or leaving? Designing for persistence in an online educator training programme in Indonesia. *Open Learning: The Journal of Open, Distance and e-Learning,* 28(2), 141–152.
- Business Credit. (2010). NACM: Leading education: Flexibility with online course offering. *Business Credit*, 112(8), 26.
- Charles Darwin University. (2016). *Higher education assessment procedure (Version 1)*. Office of Learning and Teaching. [Accessed from the university website/OUA link December 2016]
- Curtin University. (2015). Assessment and student progression manual: Consolidated policies and procedures (7th ed.). Office of the Deputy Vice-Chancellor, Academic. [Accessed from the university website/OUA link December 2016]
- Dearnley, C., & Matthew, B. (2007). Factors that contribute to undergraduate student success. *Teaching in Higher Education*, 12(3), 377–391.
- Department of Education and Training. (2017). Completion rates of higher education students: Cohort analysis, 2005–2014. Retrieved from https://docs.education.gov.au/system/files/doc/other/cohort analysis 2005-2014 0.pdf
- Forsyth, H., Pizzica, J., Laxton, R., & Mahony, M. J. (2010). Distance education in an era of elearning: Challenges and opportunities for a campus-focused institution. *Higher Education Research & Development*, 29(1), 15–28.
- Gabriel, M. A. (2004). Learning together: Exploring group interactions online [1]. *Journal of Distance Education*, 19(1), 54–72.
- 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.
- Griffith University. (2016). Assessment submission and return procedures. Griffith University Learning and Teaching Committee. Retrieved from: http://policies.griffith.edu.au/pdf/Assessment%20Submission%20and%20Return%20Procedures.pdf
- Hartnett, M. (2012). Relationships between online motivation, participation, and achievement: More complex than you might think. *Journal of Open, Flexible and Distance Learning*, 16(1), 28–41.

- Holder, B. (2007). An investigation of hope, academics, environment, and motivation as predictors of persistence in higher education online programs. *Internet and Higher Education*, 10, 245–260.
- La Trobe University. (2016). Late submission of assessment tasks policy: Policy database document reference number 112026P. [Accessed from the university website/OUA link December 2016]
- Lee, Y., Choi, J., & Kim, T. (2013). Discriminating factors between completers of and dropouts from online learning courses. *British Journal of Educational Technology*, 44(2), 328–333.
- Lim, D. H., Morris, M. L., & Kupritz, V. W. (2007). Online vs. blended learning: Differences in instructional outcomes and learner satisfaction. *Journal of Asynchronous Learning Networks*, 11(2), 27–42.
- Liu, Y. (2007). A comparative study of learning styles between online and traditional students. *Journal of Educational Computing Research*, *37*(1), 41–63.
- Maathuis-Smith, S., Wellington, S., Cossham, A., Fields, A., Irvine, J., Welland, S., & Innes, M. (2011). Obtaining high retention and completion rates in a New Zealand ODL environment: A case study of strategies employed by Information and Library Studies Faculty at the Open Polytechnic. *Journal of Open, Flexible and Distance Learning, 15*(1), 31–45. Retrieved from http://www.jofdl.nz/index.php/JOFDL/article/view/14
- Macquarie University. (2016). *Disruption to studies*. [Accessed from the university website/OUA link December 2016]
- Martin, S., & Fox Koob S. (2017, January 18). Third of university students failing to complete course. *The Australian*.
- Merriman, K. (2006). Employers warm up to online education: Online degree programs offer flexibility and cost advantages that are becoming increasingly popular. *HRMagazine*, 51(1), 79–82.
- Mueller, R. A. (2015). Do values drive the plan? Investigating the nature and role of organizational values in university strategic planning. *Tertiary Education and Management*, 21(1), 41–55.
- Murdoch Institute of Technology. (2015). *Assessment policy*. [Accessed from the university website/OUA link December 2016]
- National Health and Medical Research Council. (2015). *National statement on ethical conduct in human research*, National Health and Medical Research Council. Retrieved from https://www.nhmrc.gov.au/guidelines-publications/e72
- Open Universities Australia. (2016). 2015 OUA Year in Review. 2015 Annual Report. Retrieved from https://www.open.edu.au/yearinreview2015/
- 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.
- Palmer, S. (2012). Understanding the context of distance students: Differences in on- and off-campus engagement with an online learning environment. *Journal of Open, Flexible and*

- *Distance Learning, 16*(1), 70–82. Retrieved from http://www.jofdl.nz/index.php/JOFDL/article/view/85
- Powell, S., Tindal, I., & Millwood, R. (2008). Personalized learning and the Ultraversity experience. *Interactive Learning Environments*, 16(1), 63–81.
- Rovai, A. P., & Jordan, H. M. (2004). Blended learning and sense of community: A comparative analysis with traditional and fully online graduate courses. *The International Review of Research in Open and Distributed Learning*, 5(2), 1–12.
- Royal Melbourne Institute of Technology. (2016). *Policies and procedures: Assessment:*Adjustments to assessment procedure. [Accessed from the university website/OUA link December 2016]
- Safford, K., & Stinton, J. (2016). Barriers to blended digital distance vocational learning for non-traditional students. *British Journal of Educational Technology*, 47(1), 135–150.
- Sener, J., & Hawkins, R. L. (2007). Factors affecting completion rates in asynchronous online facilitated faculty professional development courses. *International Journal of Instructional Technology and Distance Learning*, 4(12).
- Simpson, O. (2013) Student retention in distance education: Are we failing our students? *Open Learning: The Journal of Open, Distance and e-Learning*, 28(2), 105–119.
- Stacey, E. (2002). Learning links online: Establishing constructivist and collaborative learning environments. In S. McNamara & E. Stacey (Eds.). *Untangling the Web: Establishing Learning Links*. Proceedings of ASET Conference, Melbourne, 7–10 July.
- Summers, J. J., Waigandt, A., & Whittaker, T. A. (2005). A comparison of student achievement and satisfaction in an online versus a traditional face-to-face statistics class. *Innovative Higher Education*, 29(3), 233–250.
- Swinburne University of Technology. (2014). I. [Accessed from the university website/OUA link December 2016]
- Taipjutorus, W., Hansen, S., & Brown, M. (2012). Investigating a relationship between learner control and self-efficacy in an online learning environment. *Journal of Open, Flexible and Distance Learning, 16*(1), 56–69. Retrieved from http://www.jofdl.nz/index.php/JOFDL/article/view/95
- Unis Australia calls for perspective on completion rates. (2017, January 18). *Charles Darwin University Newsroom*. Retrieved from http://www.cdu.edu.au/newsroom/unis-australia-callsfor-perspective-on-completion-rates
- University of New England. (2016). Assessment policy and procedures. [Accessed from the university website/OUA link December 2016]
- University of South Australia. (2016). Assessment policy and procedures manual. [Accessed from the university website/OUA link December 2016]
- Ware, J. (2014). Earning an MBA online: Internet-based programs offer flexibility. *Florida Trend*, *56*(12), 84.
- Waugh, M., & Su-Searle, J. (2014). Student persistence and attrition in an online M.S. program: Implications for program design. *International Journal on E-Learning*, 13(1), 101–121.

Xie, K., Debacker, T. K., & Ferguson, C. (2006). Extending the traditional classroom through online discussion: The role of student motivation. *Journal of Educational Computing* 34(1), 67–89.

Yasmin. (2013). Application of the classification tree model in predicting learner dropout behaviour in open and distance learning. *Distance Education*, 34(2), 218–231.

Biographical notes

Catherine Moore

aftercath@gmail.com

Catherine Moore is currently a doctoral candidate with the University of Liverpool. Until December 2016 she was a Lecturer in Information Systems at the Swinburne Business School. Cath writes in the area of online education.

Steven Greenland

steven.greenland@cdu.edu.au

Steven Greenland is a Professor in Marketing at the Charles Darwin University Business School. He has over 25 years marketing and education experience, including academic positions in Australia and the United Kingdom. Steve regularly publishes in the areas of online education, business strategy, and marketing.

Moore, C., & Greenland, S. (2017). Employment-driven online student attrition and the assessment policy divide: An Australian open-access higher education perspective. *Journal of Open, Flexible and Distance Learning*, 21(1), [52–62.].



This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License.