

The benefits of creating open educational resources as assessment in an online education course

Eseta Tualualelei

University of Southern Queensland

This paper reports preliminary findings of a pilot project at an Australian regional university where students in an online multicultural education course created open educational resources as an assessment task. Designed as action research, the project transposed early years educators' concerns about professional learning and resources into an assessment task. Students created resources in response to the task, and these resources were collated into an open educational resource. Based on a range of project data, the paper presents preliminary findings that show the assessment task had many benefits for students including increased engagement, practical learnings and pride in sharing their work. The paper concludes with implications for practice and suggestions for related research.

Keywords: open educational practice, renewable assignments, authentic assessment

Introduction

One of the five objectives of the United Nations Educational, Scientific and Cultural Organization (UNESCO) *Recommendation on Open Educational Resources* (OER¹) (e.g., 2019) is to build the capacity of stakeholders in OER. In particular, UNESCO (2019, p. 6) recommends that OER become "an integral part of training programs at all levels of education, including assistance in initial training programs for educators". Renewable assignments, which are openly published student-created artefacts (Wiley & Hilton, 2018), have the potential to meet UNESCO's OER Recommendation, but are not yet widely used in Australian higher education; this paper reports on a project that explored renewable assignments in initial teacher education. After contextualising the project against research about creating OER as assessment, details of the current project are described. This is followed by presentation of preliminary results and discussion focussing specifically on the benefits of renewable assignments for students as well as challenges from the perspective of a novice open educational practitioner. The paper will argue that while renewable assignments in initial teacher education have clear benefits, several challenges must be addressed to broaden the appeal of this activity for academic staff.

Contextualising student creation of open educational resources

There are many benefits of creating OER as assessment in higher education. The creative processes of OER may increase community, cross-institutional and international sharing and collaborations, and disrupt traditional models of education (Borthwick & Dickens, 2013; UNESCO, 2011). Renewable assignments, defined as "those which both provide a learning benefit to the student and result in OER that provide a lasting benefit to the broader community" (Wiley, Webb, Weston, & Tonks, 2017, p. 62), exemplify this benefit. For instance, Fatayer (2016) found, in a study of computing, engineering and mathematics undergraduates who repurposed their course assignments as OER, that student-generated artefacts delivered a wide range of benefits beyond students' learning in the course. These benefits are pertinent to the early years education sector because while Australian initial teacher education programs include course components about teaching diverse students, many novice teachers feel unprepared for

¹ Throughout this paper, OER is understood to mean "teaching, learning and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others" (UNESCO, 2019, p. 5)

multicultural education in the classroom (Webster & Valeo, 2011). There is also a lack of relevant early years resources (Biddle, Ellen, Mortreux, & Waite, 2019) signaling a potential role for multicultural OER. Student-generated OER may also help learners become more engaged, active and motivated to achieve higher educational outcomes (Seraphin et al., 2018; UNESCO, 2011). However, Wiley et al. (2017, p. 67) caution that, “additional research is needed before broad claims regarding the degree to which student-created OER supports better student learning can be made”.

A challenge with using renewable assignments is that OER are not yet widespread in higher education. There is a lack of educator capacity and guidance in this area (Cronin, 2017; McNally & Christiansen, 2019). Wiley, Bliss, and McEwen (2014, p. 785) have also identified five unresolved challenges for OER: the discovery problem, “making OER easier for people to find”; the sustainability problem, “making OER programs financially self-sustaining”; the quality problem, “dealing with the pervasive perception that, because they are free, OER are necessarily of inferior quality”; the localisation problem, “improving our understanding of how to make OER more useful in a wide range of contexts”; and, the remix problem, “understanding why people do not exercise their revise and remix permissions in OER”. Thus, institutional and academic awareness and uptake of OER has been slow, particularly in Australia which has yet to enact public policies and frameworks for promoting OER (Bossu, Bull, & Brown, 2012; Stagg et al., 2018). A deeper understanding of these barriers may assist with mainstreaming OER into higher education. According to Cronin (2017, p. 28), the field needs “studies of situated practices in specific places and times, enabling detailed exploration of agency, structure, and culture with respect to OER” (p. 28). To this end, the current project was designed to address the research question, “What are the benefits and challenges of creating OER as assessment in an online education course?”

The current study

This study followed in the tradition of Lewin (1946) who coined the term ‘action research’ in describing his process for social research. Lewin’s process involved three main stages: 1. planning, 2. execution of the plan, and 3. reconnaissance or fact-finding. These stages form a cycle or “spiral of steps” until the research objective is met (Lewin, 1946, p. 38), with reflexivity occurring throughout the process (McKay & Marshall, 2001). Action research was chosen for this study because of its capacity to create adaptive solutions for practical problems, aligning with the aims of OER. The study proceeded under ethical approval number H19REA180.

1. Planning

The project, which is ongoing, is taking place at an Australian regional university that has over 75% of students studying online. In the course where the project was carried out 97% of students were mature age (ie. not direct school leavers) and 83% were studying part-time. The course focusses on Reconciliation and multicultural education in early years education, and the first assessment originally involved online forum participation, comparing themes in two children’s books, and a reflection. The children’s book task was replaced with the task of creating OER and the academic who wrote the original assessment peer-reviewed the new task to confirm that course objectives and professional standards continued to be met. The assessment was delivered in semester 3, 2019 (November 2019 – February 2020).

To enhance the authenticity and focus of the assignment task, the views of in-service educators about professional learning needs for Reconciliation and multicultural education were gathered through focus group interviews. The educators’ words were used to form a list of concerns for the assignment, e.g., “We’re mostly white educators at our service and we’re not sure; how much are we allowed to share of Indigenous culture? Are there any guidelines?” and “I need words in community languages to comfort children when they’re upset or for toilet training. Can someone make a resource with simple, useful phrases that we could use with children?” Students then designed and developed open resources addressing these concerns.

2. Execution

All students enrolled in the course in semester 3 completed the OER task as part of their coursework. A video support presentation provided the assignment rationale, including an explanation of OER. The course facilitator answered all student queries about the assignment, and independent markers graded students' assignments. Well after the course ended, in May 2020, students were invited to publish their work openly. The invitation was timed so that students would not feel coerced into open publishing or fear that it would affect their course grade. It was also timed to coincide with the university recess, when students were not busy with their studies. Students who had failed the course were not invited because they had not fulfilled the course objectives. Students who did course overall were invited in recognition that assessment pressure may have affected the quality of their original work and to provide insights into how students of all levels engaged in the open publishing process. Some students published their work as submitted, but others refined their original work with the guidance of the editors. All students had the opportunity to approve or reject the final versions of their work. Their book was published via Pressbooks (<https://usq.pressbooks.pub>), an open source book creation platform, and it is available at <https://usq.pressbooks.pub/gemsandnuggets1/>.

3. Reconnaissance

For this stage, data were collected by examining student data from the learning management system, collating student perspectives of the assignment task and through collegial reflection. The remainder of this paper discusses this stage and outlines implications for the second action cycle and beyond.

The benefits of creating OER as assessment

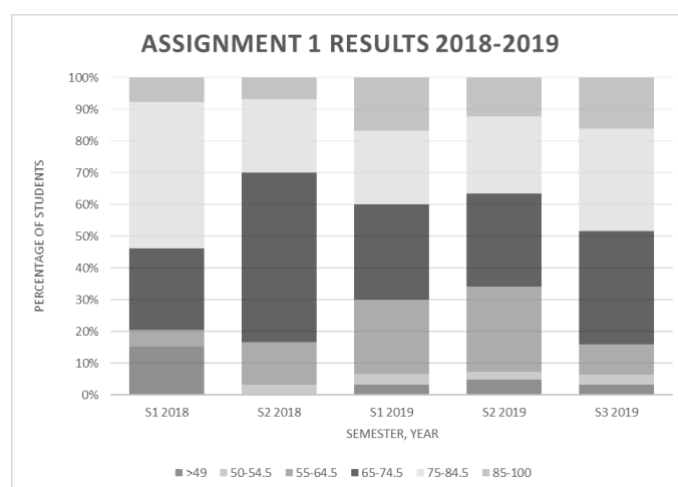


Figure 1: Comparison of results 2018-2019

Figure 1 shows a comparison of grades for cohorts from Semester 1, 2018 where the original assignment was offered for the first time to Semester 3, 2019 when the OER task ran. The Semester 1, 2018 grades were skewed towards 75-84.5% and there was a high failure rate, while Semester 2, 2018 had no fails but the grades were skewed towards 65-74.5%. The results over the next two semesters continued to vary despite the teaching team, course content and assignment remaining constant. While this could be explained by the small cohort numbers (30 to 42 students), the introduction of the OER task in Semester 3 2019 resulted in a more even distribution of passing grades compared with previous semesters (16% of students scored 85-100 marks, 32% 75-84.5 marks, 35% 65-74.5 marks, 10% 55-64.5 marks, 3% 50-54.5 marks) and only 3% of students failed compared with 15% of students who failed in Semester 1, 2018. This suggested that the OER task was successful in developing student understandings for the first part of the course, providing the foundational

knowledge students needed to engage cognitively with the rest of the course.

The impact of the OER task was confirmed in several other ways. Engagement analytics from the learning management system showed that 90.3% of students in Semester 3 2019 accessed the assignment support video whereas most resources in the course were accessed by an average of 67.8% of students. Analysing questions students asked about the assignment showed that most questions were about student ideas for the OER and about digital technology, with a few questions about formatting and audience. This contrasted strongly with previous semesters where questions focused heavily on clarifying assignment instructions, academic writing and referencing but less on key concepts and understandings the assignment aimed to develop.

One student, who had failed the course twice before, asked in the online forum:

Anyone know of a translator that can do English to either of the popular Torres Strait Islander languages (Meriam Mer or Kala Lagaw Ya)? If anyone has found a site that does this, could you please let me know? Thank you.

Her question and other online interactions demonstrated a resourcefulness and engagement that the teaching team had not observed from her participation in previous iterations of the course. The impact of the OER task was confirmed in her reflection where she stated:

Throughout constructing the resources to assist educators with their concerns, I identified some areas that I was unsure about and felt that my knowledge grew in these areas with the research that was undertaken . . . I was amazed to see the many linguistic backgrounds of all of the Aboriginal communities and developed awareness of how, when taken for granted, language can be the downfall in education causing issues with communication and understanding.

This kind of development in student understanding, fundamental to the work of multicultural education, was not achieved with the original assignment where the student had less agency with interpreting the assignment task and was not able to follow her own lines of inquiry. The OER task benefitted this student such that she passed the assignment and the course on this third attempt, supporting the notion that renewable assignments can increase student engagement and lead to better academic outcomes (Seraphin et al., 2018).

Similar insights were found in other student reflections. One student highlighted her newfound awareness of her role in Reconciliation, writing:

The main concept that I will take away . . . is how important Reconciliation is and how educators are the crucial link between Reconciliation and what vision of that becomes reality in the classroom environment.

From a pedagogical perspective, student recognition of their role in Reconciliation within the first four weeks of the course provided an essential foundation for the rest of the semester. Another student reflected on her initial assumption that she could simply 'google a number' for the Indigenous community. However, in her words:

I quickly realised there was no such number for a First Nations Peoples 'spokesperson' and that by projecting what I had perceived to be culturally acceptable was in fact limiting my own cultural competence. Throughout my research I found that building relationships would take time . . . I was quite intimidated by this and was compelled to think more deeply about what my genuine intentions were, reflecting on my own personal beliefs.

The practical task of creating an OER connected to real resources for professional peers prompted

genuine reflection by this student. She overcame her initial fears and eventually connected with three local First Nations community organisations and created a resource for other educators about building community relationships. This illustrated the community and cross-institutional connections that may be promoted by OER (Borthwick & Dickens, 2013). Another example of practical learning included an increase in students' digital literacy skills as they utilised various technologies in researching and creating their resources. The value of the OER task was further confirmed in the mid-course evaluations where students stated, "Course content is very meaningful" and "Great opportunities to learn".

Of 37 students, 17 (45.9%) chose to publish their work openly. Most of these students passed the assignment with 65 marks and above. However, three students had scored under 64.5 marks indicating that open publishing appealed to all students, regardless of academic level. The feedback from students about the publishing process was positive with the following comments received during approvals for the final draft:

Absolutely love it!! So proud!! Thanks for all your hard work behind the scenes.
Wow, what a great resource! I want to thank you for allowing my work to be added to the book. Thanks again for this opportunity to share my work with the wider community.
The book looks amazing! What a great resource and so exciting to be a part of it.

These comments conveyed a clear sense of student appreciation and pride in being able to share their work. Typically, higher education assessments have a limited audience and are "disposable" (Wiley et al., 2017), but the renewable assignment added a sense of purpose and authenticity that appeared to excite students and affirm the value of their course-related work.

The challenges of creating OER as assessment

The first cycle of action revealed a number of challenges. First, less than half the students chose to publish openly despite the availability of this option. The relatively low proportion of students may be attributed to the novelty of openly publishing, or perhaps the assessment, completed in December 2019, was too far from students' minds when they were invited to publish in May 2020. In the next cycle, the previous cohort's published work will be available to help motivate students to share their work, and students will be approached closer to final course grades being released. Second, collating and editing students' work for publication was a time intensive process. Four staff members spent more than 40 hours in total preparing student work, checking copyright for media, and communicating with students. The course facilitator was supported institutionally with workshops about open licenses and open publishing, regular open educational community meetings and a dedicated online platform with resources and discussion forums, which contrasts with research which cites a lack of guidance for academic staff (e.g., Cronin, 2017; McNally & Christiansen, 2019). However, even with this support, much time and effort were invested in developing the teaching team's OER capacities and knowledge. This time is necessary if, as Wiley et al. (2014) suggest, OER is to overcome 'the quality problem' of being perceived as inferior to paid resources. Arguably, this time should reduce as course facilitators' knowledge and experience grow but this challenge alone may be prohibitive. Third, related to 'the quality problem' were unforeseen issues, some ethical. Some students created resources in languages such as Vietnamese and Gujarati that were beyond the project's resources to verify for accuracy. One student offered a local community elder as her resource and although both the elder and the student approved, the course facilitator decided not to openly publish the elder's mobile number for privacy reasons. The facilitator also grappled with her students' positionality; they are mostly Anglo-Australian and might be open to criticism for creating resources about Reconciliation. These issues and others involved a burden of decision-making that was unanticipated. Such challenges, as potential deterrents to academic staff, need to be addressed for OER to become an integral component of initial teacher education as UNESCO envisions.

Implications for the second cycle

These preliminary results indicate that renewable assignments have clear benefits for students including increased engagement with assignment tasks, practical learnings leading to authentic reflection and pride in assignments being repurposed for the wider community. Challenges for the second cycle include increasing the number of students who openly publish, finding time-efficient solutions for accelerating the open publishing process and addressing the quality problem by using learnings from this first cycle. Parallel research is being conducted with early years educators to see whether students' OER benefit the wider community, and it is hoped that because of the advantages for students, the assignment will continue to be offered beyond the life of this project. Related research is recommended in exploring other possible scenarios for renewable assignments in initial teacher education and finding ways to reduce the time burden on individual academic staff.

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