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The opportunities and challenges for enabling education: implementing Open Educational Practices (OEP)

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The open education resource (OER) movement has emerged to encompass wide ranging open practices as it increasingly re-shapes the future of higher education. This popular movement provides both opportunities and challenges for educators, as identified by research addressing the feasibility of open practices (Bossu, Brown & Bull, 2012).

Enabling education programs and open education practices would seem to be good partners. Free resources without copyright restriction appear to be a perfect match for policy aimed at widening access to higher education.

This paper reports on the challenges faced in developing an enabling course resourced entirely by open licensed materials. The course provides many opportunities for broadening the accessibility of higher education beyond the scope of current enabling programs but has encountered a variety of practical challenges during its development. The paper then proceeds to suggest how some of these challenges might be addressed in the foreseeable future.

Background and context

The last few years have witnessed the emergence and rapid growth of open education resources (OER) and practices (OEP) which promise to reshape the provision of learning and teaching in higher education on a global scale. The movement has attracted considerable public discussion, spurred along on the global stage with the recent arrival of MOOCs (Massive Open Online Courses) and the recognition by institutions that they need to seriously consider their own response and strategy to this changing landscape of higher education. *There seems to be a herd instinct at work as universities observe their peers joining the xMOOCs bandwagon and jump on for fear of being left behind* (Daniels, 2012, p.3). Despite this overzealous reaction there is clearly growing momentum among higher education institutions to participate in the 'open' movement.

Australia has been relatively slow to embrace OER and OEP. In particular it is worth noting that enabling programs, with their commitment to broadening access and equity, have not widely embraced open access resources as their sole source of materials (Huijser, Bedford & Bull, 2008). A recent Australian study (Bossu, Brown & Bull,

2012), *Adoption, use and management of Open Educational Resources to enhance teaching and learning in Australian higher education,* funded by the Office of Learning and Teaching, sought to investigate the state of awareness and use of OER in Australia with a view to developing a Feasibility Protocol to assist institutions to develop policy and strategy as they address this changing landscape of provision of higher education. The study resulted in a set of guiding principles which poses questions and raises issues which government, institutions and individual academics need to consider if they wish to take advantage of the benefits which open practices can bestow.

The Protocol examines both the benefits and barriers to participation in open practices as well as considering the current policy context and strategic planning for a rapidly changing future. This paper is particularly concerned with the opportunities and challenges which individual academics may encounter as they adopt and implement open resources and practices in the context of enabling education. We present a case study of one enabling education program where OERs were implemented and apply the opportunities and challenges for academics identified in the Feasibility Protocol to analyse the case study experience. This allows us to explore the challenges and opportunities of OER for enabling programs within a practical context.

Enabling education in Australia has a long history of relatively free access and provision of opportunity to persons who would otherwise be unable to pursue higher education. Supported by the governments 'enabling provision', institutions have increasingly been encouraged to implement enabling programs to meet the government's social inclusion and widening participation agenda. The 'enabling provision' was designed to provide fee free preparation courses for persons from groups considered to be under-represented or disadvantaged in their access to higher education, with a guarantee of entry to undergraduate studies upon successful completion of the course. Its intention was to make a sustained and substantial contribution to the mismatch between the composition of Australian society and the social composition of participation in the higher education sector (NBEET, 1990). More recently the government has reaffirmed this direction and set ambitious reform targets for further widening participation in higher education (Bradley, Noonan, Nugent & Scales, 2008). The provision of appropriate preparatory programs for those who are underprepared to directly access undergraduate studies is an important requirement in widening participation (Daniel, 2011). Arguably, the greater adoption of open practices would appear to be a positive direction for enabling practitioners to pursue the objective of improving access to learning opportunities through reduced cost and greater flexibility in accessibility.

Opportunities

There are many identified benefits that the OER movement can bring to the improvement of education and training. Open and distance learning (ODL) and e-learning are recognised as the key means for providing for the anticipated substantial growth in demand for higher education on a global scale (Daniel, Kanwar & Uvalic-Trumbic, 2009). The rapidly expanding range and availability of OER promises to save time and duplication of effort in the production of learning materials. This in turn potentially results in human resource and financial efficiencies. Furthermore, the repurposing of open resources and the peer review processes associated with open access review and repurposing of materials can lead to improvements in the quality of

materials and act as a catalyst for innovation in design and delivery (OECD, 2007). Institutions stand to benefit from developing an OEP profile in terms of increasing collaborative efforts both within and beyond institutional boundaries, contributing to building an institutional profile of openness, inclusion and concern for social improvement on a global scale (OECD, 2007).

The literature regarding open education makes frequent reference to the widening participation benefits of its adoption (OECD, 2007; Caswell, T., Henson, S., Jensen, M., & Wiley, D. (2008); Daniels, 2011; Bossu, Bull & Brown, 2012). As a strategy to widen participation OER also represent a cost effective means of leveraging taxpayer funded education (OECD, 2007). It can be argued that learning resources and courses produced with taxpayer funding should allow free sharing and reuse of resources which have been developed with those public funds. Cost and geographic location are recognised as factors for the non-participation of many students entering enabling programs who frequently come from disadvantaged economic and geographic backgrounds. The OER movement has the potential to greatly reduce the cost, ease access to learning materials and widen participation amongst people who have been traditionally excluded by geographic or financial circumstances (Lane, 2008 Making higher education available for free or at significantly reduced cost to anyone who has access to the internet is firmly in line with altruistic academic traditions of social improvement through provision of education and this idealistic perspective is an encouragement for many academics to embrace open practices.

A case study – Some of the challenges

It was in support of widening participation and equity, as outlined above, that the Tertiary Preparation Program (TPP), an enabling program for students requiring an alternative entry into undergraduate study at the University of Southern Queensland, was made available through the OpenCourseWare Consortium (OCWC) repository in 2007. The current case study looks at the process undertaken through 2013 to further the process of creating an open enabling program by replacing the readings supporting the core TPP course, *Studying to Succeed* with open sourced texts. Prior to this, only the courseware could be provided for free and open access, the readings could not, due to copyright issues. A pressing issue for the need for open copyright readings was the enhancement of provision of the TPP for incarcerated students, who are traditionally disadvantaged in access to educational opportunities because of their lack of access to appropriate hardware, broadband Internet and other technologically dependant pedagogical innovations (Huijser et al, 2008; Bull et al, 2012). USQ has responded to this inequity with a project to deliver the TPP using e-Readers to incarcerated students. There were copyright issues for several of our key course readings in the e-Reader format. This case study reports upon the challenges encountered in finding these new, open access readings. The case study experiences are framed around the key challenges for academics outlined in the Feasibility Protocol. In the end, the readings were successfully found, but the task was neither simple nor easy, and although the results are of a high quality, this was much harder to achieve than expected. Our experiences are not unique. There is some documentation of other educators (for example Levey, 2012) encountering very similar challenges as those outlined here.

Contextual barriers

As Matkin (2009) has indicated the repurposing of OER materials must take into account contextual factors. It is simply not enough to adopt or translate materials as they stand. The educational needs of students vary from institution to institution even within the same country. Consequently, content and pedagogy need to be 'localised' if they are to be educationally valuable for the majority of learners. Several contextual factors specific to this course were significant to the project, because they provided some of the limiting parameters for the choices of materials. The TPP is delivered in four different delivery modes to meet the needs of the large and diverse student cohort. These are: entirely on-line; on-campus; by distance using hard-copy materials and the postal system, and via e-Readers. We regard it as an important equity policy that the TPP course is provided in an equivalent form in each mode, excluding many potentially valuable website-based resources that could not be presented in hard copy or e-reader form. In addition, resources had to be at a suitable length and language complexity for pre-university students, and there could be no assumption of prior discipline content knowledge, precluding many academic articles. Finally, also for reasons of equity, it is TPP policy that all the course content and materials are provided to the students free of charge, that is, no textbooks or readers are required to be purchased, so we could not simply provide free and open course instruction with the expectation that students are required to purchase additional texts.

In addition, the texts needed to conform in particular ways to the requirements of the course, providing a further set of constraining factors. Since the course provides instruction about academic credibility and referencing, the course readings needed to be either academically credible, or for their credibility to be easily assessable by students and use only one consistent referencing style to avoid confusion for our cohort. Further, the course readings serve particular curriculum purposes, for example where formal academic language is being taught, a text is needed that demonstrates this style of language, and a selection of texts is needed that can provide a sufficient range of evidence for student assessment tasks, including the final essay.

All these factors were project specific and could be considered extra complications beyond the scope of the general educational use of OERs in an enabling program. Yet almost any course will have a similar set of specific contextual factors, which will create complex criteria for the selection of reference texts. This is a major reason why so many educators put so much time into developing their own resources, even though there may be comparable resources already in existence. Research by Ossiannilsson & Creelman (2012) confirms this suggestion, identifying one of the major reasons for poor uptake of OERs as problems with the reusability of resources. There are two main reasons for this. Materials with Creative Commons copyright are frequently labelled 'no derivative' meaning they must be used without alteration, making them hard to incorporate into different educational contexts. Secondly, the materials are developed for very particular contexts, and the effort of adapting them to a different context (from a weekend face to face workshop to an online semester course for example) is seen as more time consuming than just creating an original resource, especially when the initial search time is extensive. A 'not invented here' attitude has also been identified, (McGreal, 2010) which argues that materials and resources developed elsewhere or by others are perceived to be inferior.

Limited knowledge and understanding of OERs, compounded by discoverability concerns

Research has shown that little is known about how teachers and learners use, repurpose and interact with OER (Panke, 2011). Both educators and learners appear to have a limited understanding of OER for teaching and learning, whether formal or informal (Conole & Weller, 2008; Panke, 2011). This was further confirmed by Bossu, Brown and Bull (2012) who identified a lack of interest in creating and using OER and the poor quality of many OER resources as significant factors for survey respondents. Search strategies in this case study were initially highly ineffective, and changed over time as a result of trial and error, and growing understanding of the complexity of the OER landscape. There is currently very little readily available guidance for educators wishing to use open access materials within this landscape, so our haphazard approach is neither surprising nor unique (Levey, 2012). At first we searched open courseware sites like Open Educational Resources (OER) Commons and Open Courseware Consortium because these places are widely promoted within the media as repositories for a huge range of open educational resources. We also used search engines like opentapestry.com, curriki.org, and Merlot which search the open courseware provided by many institutions. However this search approach was not suitable for the course needs. There were two reasons for this. Firstly, while curriculum was provided, the readings seldom were. Most of these open educational courses did not use open source readings. The courses either assumed students would procure the required readings themselves, or if they were provided for enrolled students, the readings were removed from the open versions of the courses. Secondly, the course materials themselves were either designed for in-class teacher delivery and support and were not readily adaptable for an on-line delivery mode, or they were fully developed for on-line delivery, highly specialised, and not adaptable for fitting onto a program that requires equivalent paper based learning materials.

More appropriate search approaches were soon discovered. The Directory of Open Access Journals, (DOAJ), Springer Open and Google Scholar Advanced search with the 'open source' option ticked, were particularly useful and productive search approaches. For open source textbooks, the Directory of Open Access Books (DOAB) was helpful. DOAJ and DOAB are well constructed, user-friendly search engines for finding open access articles and books. However, these search engines were not able to solve all the discoverability problems.

At least at the time of this case study, the various OER search options provide access to a different range of items. There is not one place to search that finds all the open access materials. Furthermore, DOAJ, opentapestry.com and Google Scholar open search mechanisms are not particularly accurate. In addition to bringing up items that have open copyright status, they also provide many items that are not open source. This was often dismaying when resources found via an open source search looked promising, but turned out to be clearly labelled with 'all rights reserved' copyright.

Copyright and legal considerations such as intellectual property policies

Perhaps the greatest challenge faced by OEP advocates and practitioners is related to copyright and intellectual property policy issues. There is widespread lack of understanding of the legal aspects surrounding the use and repurposing of learning

materials and this complexity and uncertainty discourages their adoption. The absence of explicit government and institutional policy enablers have tended to impose limitations on the adoption and use of OER (Bossu et al. 2012). There were many promising texts where copyright was not clear, but highly ambiguous. For example, one text that suited the course needs was a government publication which was labelled with a 'cc-by' (creative commons attribution) copyright label, directly followed by a restrictive copyright statement. Several promising documents were labelled with cc copyright on the html page version, but the downloaded PDF document contained much more restrictive copyright information. This problem is mentioned also by Levey (2012, p. 126) in her attempt to source an educational program using open sourced content.

Certain rich sites of open content posed particular problems. TED (Technology, Entertainment, Technology; TED.com) talks and RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce) talks were a rich source of potential material for our course, with many engaging lectures on our topic. However there was a disappointing complication even with these. Although TED and RSA philosophy is strongly supportive of free sharing, the copyright on the talks demands 'no derivative'. The talks cannot be altered, in order to ensure the speakers are not misrepresented. In order to provide hard copy and e-Reader versions the transcripts need to be saved in PDF form, and that constitutes altering the material. We required permission from TED and RSA to be able to do this, which was finally provided after four months. Replies can take up to six months and this degree of uncertainty makes progress difficult. Some of our curriculum decisions had to remain provisional pending this permission, and much time was wasted searching for substitute readings, in case of rejection.

The Suitability and quality of existing open resources

Concerns with the quality and suitability of the resources were relevant to this case study. To be included in our enabling course any academic article needs to be relatively short, have a clear structure, good grammar and be readable by pre-tertiary students. There were many open access articles that were not appropriate for our students either because of their very poor grammar, structure or writing styles. The academic quality of open access articles is harder to assess than the quality of the style and writing. Presuming it to be equal to those in restricted publications, it was nonetheless obvious that the majority of high quality papers by academic researchers of repute are not currently in open access journals. It was frustrating to find many highly appropriate articles in copyright restricted journals. The most appropriate journal for the purpose of the case study course appeared to be the Journal of Happiness Studies, which was full of relevant articles, but was not open access. The good news is that even over the last few months, more high quality academic articles are being badged open access. Ossiannilsson & Creelman (2012), and Bossu and Tynan (2011) note the lack of quality control, and perception of poor quality as a key issue in the slow uptake of OERs. Ossiannilsson & Creelman suggest the growth in 'crowd sourced' quality control, using the sorts of peer reviewing processes of social media sites such as Facebook and Google. However, for university level course materials we would suggest the standard peer review process of academic journals should be more appropriate.

Addressing the challenges

The opportunities that OERs offer to enabling educational programs appear to be significant, but the barriers to implementation are currently contributing to slow progress in implementation. Reflection upon the experiences of the TPP case study suggests key areas where change could be targeted to assist OER implementation in enabling programs. These insights from the case study confirm the findings of the Feasibility Protocol, and other studies. We have decided to focus upon three principal areas.

Implementation strategy: iterative design

The first key reflection upon strategy to come out of the case study was the importance of an iterative process for curriculum design and resource search. This is likely to be the case with any curriculum development that works closely with readings or other resources, but in the case of OER based curriculum, the iterative nature of the process is emphasised because of the multiple limitations imposed by the resources. A brief recount of the decision making process leading up to the choice of a topic provides an illustration of this strategy.

The search began with the modest intention of simply replacing the current readings list with open source equivalents. It soon became apparent that finding direct substitutes in the way we required was going to be time consuming and result in a poorer selection of readings than the set we had. This led to the decision to change the study topic, which had not been popular with students in any case.

A key factor in selecting a new topic became whether it was well resourced by open access materials. Several topics were rejected after open access searches found lack lustre results. We finally settled on a fruitful one; 'happiness', which worked because it is of broad current media interest and high profile academic interest. That meant there were not only many academic papers, but also a range of accessible but academically credible other texts in the open source arena, such as TED talks, and articles in academically credible and open source media such as *The Conversation*. So the first strategy that was developed to meet the need for open source materials was the choice of topic itself, reflecting the iterative relationship between resources and curriculum development.

Professional development

Upon reflection, many of the approaches to addressing the challenges posed by integrating open access materials into curriculum have a common focus on professional development. This is not surprising when dealing with a recent innovation in educational practice. There is a need for professional development to more widely disseminate the benefits of OEP and the challenges associated with this work and generally enhance an understanding of the use of open practices. One particular area to which this applies is the open licensing of materials and the restrictions upon use imposed by copyright. When practitioners are more easily able to ascertain the limitations of resource use, their ability to adopt OER materials in practice will be enhanced.

Another area of need for professional development is for content producers to gain skills in the use of targeted metadata. Better search processes by improved metadata associated with resources could make a considerable difference. The expertise and indeed, theory behind the high quality, effective metadata required for better search and retrieval practice is not widely promoted at the level of content producers. There appears to be scope for improvement in terms of professional development here.

A third key area where professional development is needed is in the skills involved with the production of resources with reuse in mind. The predominant current practice for producing OERs is simply to make available for free open use content that was already developed for a course or another specific purpose. This means most OER material was not designed with ease of reuse in mind, and therefore reuse is difficult and time consuming. Content producers require skills and experience in creating material that is based around adaptable generic structures, that uses broadly applicable, culturally adaptable examples, and that is not dependent upon a supporting course or institutional context. This is an area for further research because this skillset is only now becoming recognised as an emergent need, and its components are not clearly identified.

A culture of open collaboration and sharing

Traditional academic culture and mindset represent barriers to the adoption of OER, so cultural change at many scales within institutions is needed. There is a need to develop knowledge of, interest in and skills to explore, contribute to and maintain the quality of OERs in practice. Institutional commitment is required which might include using incentives and financial, technical and human resources as powerful cultural change agents to encourage wider collaboration on OER projects. The success of OERs is tied to networks of sharing and collaborating. Those who take the risk of sharing, both their creative and critical work; need to be able to do so safely, indeed with encouragement. Building a culture that values open sharing of knowledge and critique is vital, and should improve the quality of OERs as well as building their range, versatility and application.

In conclusion

To bring the educational benefits of the adoption of open practices and resources to institutions, educators and learners, the challenges being encountered by advocates and practitioners must be addressed. There is strong individual altruistic commitment to the movement but lack of skills and knowledge, problems with discoverability and quality and confusion surrounding copyright hinder the efforts to bring the opportunities and benefits to fruition. Furthermore, institutional and governmental policy in this area is lacking. This paper serves to demonstrate some of the practical challenges which will need to be overcome. It is our contention that many of these obstacles will be reduced as implementation becomes more widespread and strategies are implemented to address the barriers. The provision of higher education is poised to be increasingly impacted by online, freely accessible OER bringing with it the promise of wider educational participation and greater social improvement. Facilitating this process requires addressing the issues surrounding this endeavour through the reporting of practical experiences such as those considered herein in the context of an enabling program.

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