

Sustaining OER at the University of Cape Town: Free, but not cheap

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Abstract

Open educational resource (OER) initiatives have made the shift from being a fringe activity to one that is increasingly considered as a key component in both teaching and learning in higher education and in the fulfilment of universities' mission and goals. Although the reduction in the cost of materials is often cited as a potential benefit of OER, this potential benefit has not yet been realised in practice necessitating thoughtful consideration of various strategies for new OER initiatives such as the OpenContent directory at the University of Cape Town (UCT) in South Africa.

This paper reviews the range of sustainability strategies mentioned in the literature, plots the results of a small-scale OER sustainability survey against these strategies and explains how these findings and other papers on OER initiatives were used to inform an in-house workshop at UCT to deliberate the future strategy for the sustainability of OER at UCT.

Keywords

open educational resources, open content, sustainability

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Introduction

Open educational resource (OER) initiatives have made the shift from being a fringe activity to one that is increasingly considered as a key component in both teaching and learning in higher education and in the fulfilment of universities' mission and goals. Emerging from individual initiatives such as Wayne Hodgins' promotion of the concept of 'learning objects' that he envisaged as "a new conceptual model for content creation and distribution ... destined to change the shape and form of learning" (2004:1) and David Wiley's notion of "open content", along with his creation of the first widely adopted open license for content (the Open Publication License), the OER movement has gradually developed into an international movement. Thanks to the subsequent creation of Creative Commons Licences spearheaded by Lawrence Lessig and his colleagues in 2001, MIT had the legal provisions for its ground-breaking OER initiative, MIT OpenCourseWare, which greatly encouraged the emerging OER community. The standardising of the term "open educational resources" by UNESCO in 2002 (UNESCO 2002) further rallied interested individuals and institutions around the practice of sharing resources.

Although the reduction in the cost of materials is often cited as a potential explicit or implicit benefit of OER (d'Antoni 2009; Lane 2008), this potential benefit has not been realised in practice as yet (Hodgkinson-Williams 2010). The sad demise of Utah State University's (USU) OER initiative in June 2009 due to financial woes (Parry 2009) is indicative of the precariousness of OER projects, particularly during an economic recession. At the time USU was the second largest OCV collection with over 80 courses, receiving 2000 unique visitors to the site every day (Wiley 2009). It is therefore not a surprise that Martin Weller refers to financial sustainability of OER as 'the daddy of all the arguments' (Weller 2010).

When the University of Cape (UCT) in South Africa decided to embark upon an OER initiative in 2009, these financial sustainability challenges necessitated thoughtful consideration of various strategies that the initiative could adopt. While seed-funding for the OER initiative of R800 000 (approximately \$100 000) was provided by the Shuttleworth Foundation, plans for a sustainable OER initiative were considered before the final choices of the size and shape of the UCT OpenContent directory, which was launched on the 12 February 2010, were made. These plans were informed by the sustainability strategies mentioned in the literature (Downes 2007; Wiley 2007), through reflection on the recommendations from the OpeningScholarship project undertaken at UCT in 2007-2008 (Centre for Educational Technology 2009) and through personal communication with members of other OER initiatives such as the University of Michigan's Open.Michigan project.

The following section describes the sustainability strategies mentioned in the literature that the UCT OER development team were able to consider in the development of a strategy for the UCT OpenContent directory. The subsequent section plots the results of a small-scale OER sustainability survey undertaken for a paper commissioned by the Commonwealth of Learning (Hodgkinson-Williams 2010) against these strategies, and the final section explains how these strategic ideas were used in an in-house OER sustainability workshop to plan for the future of the UCT OpenContent directory which has moved from an externally funded project to an institutional project.

Before moving onto the discussion about sustainability strategies, clarification of the term ‘sustainability’ is necessary. We adopt the understanding of sustainability outlined by the Joint Information Steering Committee (JISC) in the United Kingdom, namely that:

“Sustainability in relation to OERs is closely linked to the business model or approach that an individual, group or institution adopts to release, manage and support OERs. It is not just about sustaining existing OERs but about **embedding processes** and **transforming practices** to support ongoing OER production and release.” (JISC 2010, bold in the original.)

Possible sustainability strategies

The seminal papers by Downes (2007) and Wiley (2007) on the sustainability of OER initiatives provided the basis for the deliberations by the UCT OER team. Table 1 indicates the options considered by the OER team prior to the launch of the UCT OpenContent directory.

Through iterations of deliberation, the OER team settled on the following key principles for ensuring the sustainability of the UCT OpenContent initiative:

- The OER initiative would be resource-based and not course-based (i.e. individual resources such as e-books, manuals, lectures captured on podcasts or webcasts, lecture notes or presentations) so that resources from the current collection held by academics could be made available almost immediately
- The OER initiative would generally not host resources, but rather act as a directory to where the resources are already hosted so as to reduce duplication and maximise the use of existing infrastructure
- The OER initiative would approach a philanthropic funder to provide seed-funding for the development of a directory, for the marketing of this directory and for providing initial training sessions for academic staff willing to share their resources so as to illustrate the concept to academics, students and senior management at UCT
- The software selection would privilege open source software and would need to be integrated with the UCT login system so that there was no special username and login required for academics to contribute their resources
- The software would need to allow individual academics to upload and maintain their resources directly so that the process of making materials available would not need intermediary technical personnel, apart from those checking for copyright compliance
- To ensure visibility and discoverability, the UCT OpenContent would feed into international aggregating services such as OER Commons and would therefore need to comply with international metadata standards
- A ‘moderation’ process would only include checking for copyright compliance and not include an institutional quality assurance process so that the responsibility of the accuracy of the resource was taken by the academic author – following the “pride-of-authorship” model
- The management of the OER initiative would be built into the portfolio of the Curriculum Development Officer in the Centre for Educational Technology (CET) as this person

already deals with supporting the development of digital resources for teaching and learning

- The maintenance of the UCT OpenContent directory would be included in CET's Learning Technologies team's portfolio
- The OER initiative would be seen as part of a more ambitious Open.UCT project that included making research and community engagement resources available to the general public and would need to work collaboratively with these 'open' initiatives and any other OER initiative such as the Health OER project in the Faculty of Health Sciences.

These principles helped to shape the design of the UCT OpenContent directory and its development using a customised version of Drupal, which allowed individual academics to upload and tag their resource (using the DublinCore metadata standards) with the minimum of effort. The choice of the software was partially influenced by discussions with colleagues from the University of Michigan, but predominantly directed by the OER UCT team's OER software platform evaluation.

Shortly after the launch of the UCT OpenContent directory, the Director of the OER UCT Project was commissioned by the Commonwealth of Learning to write a paper on the benefits and challenges of OER for higher education institutions with a specific focus on quality assurance and reduction in costs (Hodgkinson-Williams 2010). An email survey was sent to ten individual OER champions identified by the OER team at UCT or identified in special OER journal editions. Four open-ended questions about quality assurance and financial sustainability were posed and to which five individuals responded by email and one via a Skype discussion.

The responses to one of the financial sustainability questions - *How has your institution's OER initiative been funded to-date?* - are mapped to the strategies suggested by Downes (2007) and Wiley (2007) to highlight the actual strategies adopted (See Figure 1).

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Analysis of the survey suggests that currently actual strategies adopted seem to cluster around external donor funding and internal institutional funding but are extending to include governmental funding, membership to consortia, donations from alumni and via affiliate agreements and the development of new service models. What is clear from each of the examples above is that institutions are adopting a mix of strategies, but are increasingly inclining towards institutional support and exploring additional strategies such as seed-funding from donor foundations ceases to be a main strategy.

Shaping further sustainability strategies

The findings of the Hodgkinson-Williams 2010 study as well as the paper from Butcher (2010) and Luo, Ng'ambi and Hanss (2010) were used to inform an in-house workshop to deliberate the future strategy for the sustainability of OER at UCT. A range of suggestions were made during the workshop, but were not finally decided upon as the prioritising and final decision-making process is still in progress.

In an endeavour to make sense of these various strategic options, the following framework is used to classify the various strategies at an international, national, provincial, institutional and individual level. The financial category includes strategies for income generation and potential cost reduction, while the technical category includes strategies related to the development of the UCT OpenContent directory itself. The social category includes visions of OER, policy and procedures, while the legal category includes aspects related to intellectual property rights.

Conclusion

What this analysis of the potential strategies for the sustainability of the UCT OpenContent directory suggests is that the sustainability of OER cannot be seen in isolation from an institutional perspective on the value of OER as part of its institutional mission. While individual academics can share their resources independently through other social media, institutional infrastructure such as the OpenContent directory can assist in optimising this sharing in an organised fashion. However, the OER initiative is dependent upon embedding processes and transforming practices within the institution to support ongoing OER production and more widely on the growing demand for OER internationally.

Figures and Tables

Model*	Description	UCT's position
Endowment	Base funding is managed by a fund administrator and the project is sustained from interest earned on that fund	Not an immediate strategy. May be one to consider once the UCT OpenContent directory has proved its worth to the institution
Membership	A coalition of interested organizations is invited to contribute a certain sum, either as seed only or as an annual contribution or subscription; this fund generates operating revenues for the OER service	As UCT already belongs to the Sakai community and has reaped the benefits of this collaboration for its course management system, Vula, this is a strategy to consider
Donations or	A project deemed worthy of support by	Not an immediate strategy. May be one to

Voluntary support	the wider community requests and receives donations	consider once the UCT OpenContent directory has proved its worth to the institution
Conversion	A resource or service is given away for free in order to convert the consumer of the freebie to a paying customer	Not part of the initial planning, but indirectly could attract students to UCT
Contributor-Pay	A model where the provider pays upfront to make the contribution available for free	Although no monetary payment is made, the UCT OpenContent directory will rely on contributors making the investment of time to make their resource freely available
Sponsorship or corporate	A model where sponsorship is sought from a corporate	Would be a possible strategy for individual resources or for specific resources from various disciplines
Institutional	A model where an institution assumes the responsibility itself for an OER initiative	Definitely a consideration – particularly with the management of the UCT OpenContent and the ongoing maintenance of the site
Governmental	A model where governmental provides direct funding for OER projects	While not on the horizon yet, this is a strategy to pursue long-term in association with other South African higher education institutions
Partnerships and Exchanges	A non-financial model that seeks to reduce costs by sharing insights across OER networks	Definitely an option for UCT given the institutional relationship with the University of Michigan
Foundation	Seed-funding from philanthropic foundations	Essential to initiate the UCT OpenContent directory
Replacement mode	Educational content stored, disseminated, and re-used through an OER initiative replaces the use of other technology software and infrastructure such as course management systems, etc.	Not as a replacement model, but perhaps as a way of using the course management system, Vula, to share resources.
Segmentation - “value-added” services	A model that adds value to services to specific user segments and charges them for these services.	Not an initial option, but may be worth considering in the longer term

Table 1: Possible sustainability strategies suggested in the literature (*Adapted and summarised from Downes 2007: 34-35; Wiley 2007: 16-17)

Model*	Adopted by	Comment
Membership	<ul style="list-style-type: none"> OpenCourseware Consortium Connexions Consortium 	<ul style="list-style-type: none"> The Connexions Consortium has about 18 members, but the numbers are growing. Dues range from \$2,500 -\$20 000 USD (Thierstein, Connexions)
Donations or Voluntary support	<ul style="list-style-type: none"> MIT - alumni 	<ul style="list-style-type: none"> <i>Alumni have donated \$1.2 M in 3 major gifts. Additionally, we've received small gifts which in total are about to surpass \$500 K (from alum and non-alum donors)</i> (Carson, MIT)

		OCW)
Conversion	<ul style="list-style-type: none"> • Connexions 	<ul style="list-style-type: none"> • Connexions receives about 15% of the cost of books printed from the site
Sponsorship or corporate	<ul style="list-style-type: none"> • Connexions 	<ul style="list-style-type: none"> • Connexions had some corporate grants (Thierstein, Connexions)
Institutional	<ul style="list-style-type: none"> • MIT, OU, JHSPH, OUNL, UCT 	<ul style="list-style-type: none"> • <i>MIT has also contributed about \$8M from the general institute budget and currently supports about half the annual cost.</i> (Carson, MIT OCW) • <i>OpenLearn has been granted about £3 million to date of internal investment</i> (Lane, OU)
Governmental	<ul style="list-style-type: none"> • OU • OUNL 	<ul style="list-style-type: none"> • <i>OpenLearn has received £3 million for 2009-2012 from a Government Agency (The Higher Education Funding Council for England)</i> (Lane, OU) • <i>OUNL is one of the two partners of the national initiative Wikiwijs of the Ministry of Education which generates about EUR 1M per year</i> (Schuwer, OUNL)
Foundation	<ul style="list-style-type: none"> • MIT, OU, JHSPH, OUNL, Connexions, UCT 	<ul style="list-style-type: none"> • <i>MIT has generated \$33M in external funding for the development of course materials over the past 9 years</i> (Carson, MIT OCW) • <i>OpenLearn has received £4.65 million for 2006-2008 from the William and Flora Hewlett Foundation to date</i> (Lane, OU) • <i>JHSPH OCW was initiated by a grant of \$834,000 from the Hewlett Foundations for a period of 4 years</i> (Kanchanaraksa, JHSPH)
Segmentation - “value-added” services	<ul style="list-style-type: none"> • OUNL 	<ul style="list-style-type: none"> • <i>We are in the process of changing our business model from offering courses to offering services</i> (Schuwer, OUNL)
Affiliate agreements	<ul style="list-style-type: none"> • MIT agreement with Amazon.com 	<ul style="list-style-type: none"> • <i>Standard affiliate agreement with Amazon which nets us about \$40 K per year. Not huge, but money otherwise left on the table</i> (Carson, MIT)

Table 2: Actual sustainability models adopted in selected OER initiatives (*Adapted and extended from Downes 2007: 34-35; Wiley 2007: 16-17 & Hodgkinson-Williams 2010)

	Financial	Technical	Social	Legal
International	<ul style="list-style-type: none"> • Soliciting funds for OER grants from international donor agencies • Soliciting funds for OER research from international 	<ul style="list-style-type: none"> • Continuing to liaise with international aggregating services on technical 	<ul style="list-style-type: none"> • Establishing the demand for and use of OER among staff and students in HEIs and by the general public 	<ul style="list-style-type: none"> • Continuing to contribute to ways in which to use alternative licensing

	research agencies	standards		
National	<ul style="list-style-type: none"> Applying for OER development grants from the national government's Skills Development Levy fund Soliciting support from local commerce and industry, or even NGOs for the sponsorship on individual OER Brokering affiliate agreements with online resource distributors or even publishers 			<ul style="list-style-type: none"> Continuing to work with the legal lead of Creative Commons South Africa
Provincial			<ul style="list-style-type: none"> Participating in provincial collaborative OER projects 	
Institutional	<ul style="list-style-type: none"> Investigating the possibility of "top-slicing" some of the research grants for making elements of research available as OER Linking the UCT OpenContent to the online admissions system 		<ul style="list-style-type: none"> Institutionalising the advocacy role of OER Developing a OER policy Recognising the value of OER development in performance appraisal processes Encouraging new OER contributors through workshops with new academic staff and Heads of 	<ul style="list-style-type: none"> Adopting a balanced copyright strategy that endeavours to protect the individual OER author and UCT, but is not overly prescriptive Encouraging good copyright practices through copyright workshops

			Departments	
Departmental	<ul style="list-style-type: none"> Lobbying for institutional research funds to conduct OER research 	<ul style="list-style-type: none"> CET: Providing feedback to UCT OpenContent contributors on how their materials are being used Introducing other forms of tagging of UCT OpenContent to make materials more discoverable Marketing OER resources individually 	<ul style="list-style-type: none"> CET: Establishing the demand for, use of and/or contribution to UCT OpenContent among staff, students & the general public 	
Individual		<ul style="list-style-type: none"> Sharing materials that are fairly unique and focus on local content 		

Table 3: Possible sustainability strategies at UCT



Figure 1. UCT OpenContent - <http://opencontent.uct.ac.za/>

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