

Exploring the process of using OER to build transnationally accredited courses within the OERu partner network - an activity theory perspective

Marc Singer, Thomas Edison State College
msinger@tesc.edu

David Porter, Simon Fraser University
davidp@sfu.ca

Abstract

One of the goals of the OERu international consortium of higher education institutions is to encourage participating institutions to share their open courses, whether previously existing or created specifically for the OERu partners. The partners are pledged to use these open resources to create pathways for earning college credit at their own institutions, ideally through the adaptation of these open materials and the creation of assessments enabling students to demonstrate their mastery of the materials and earn credit at low cost or no cost. In 2012, the University of South Africa (Unisa) created the blueprints for a university-level course in Critical Reasoning, and Thomas Edison State College in New Jersey began the process of adapting the course and creating a stand-alone assessment through its credit-by-exam program.

This paper focuses on the strategy and process considerations that must be examined when an institution chooses to adopt an available openly licensed course from another institution and offer it for credit within their own institution - the idealized OER situation. This exploratory case study examines the course adoption and adaptation process at Thomas Edison State College, in which a course from the University of South Africa (Unisa), for offer within the OERu.org partner network, was used. The case is explored from an activity theory perspective.

The process for identifying suitable courses for the process of adoption and adaptation, development of assessments, and the creation of credit-bearing pathways is examined and discussed in this exploratory study. Recommendations are offered for accomplishing similar course adoptions within the complex ecosystem of higher education institutions.

Keywords

Open educational resources, open courseware, assessment, accreditation, credit transfer, activity theory

Introduction

Open Education Resource Universitas (OERu.org) is an international consortium of “like-minded” higher education institutions that have an interest in participating in the philanthropic mission of “widening access to more affordable education, especially for learners excluded from the formal higher education sector” (OERu.org, 2015). A paper by Taylor (2007, p.1) provided guiding ideas for the OERu and “for thinking outside the box – indeed, for thinking a long way outside the box” in terms of learning models, open courseware, and credentialing.

Taylor’s idea of an open courseware future included credit for demonstrations of competence within a “parallel universe” in which learners would use freely available open educational resources (OER) for self-study, and assessment on demand, through a network of partner institutions. These institutions would be committed to offering credit in a limited number of courses in this alternative manner of study. To date over 30 higher education institutions worldwide have joined the OERu consortium.

Part of the goal of the OERu consortium is to encourage participating institutions to share their open courses, whether previously existing or created specifically for use by the OERu partners. The partners are pledged to use these open resources to create pathways for earning credit at their own institutions, ideally through the adaptation of these open materials and the creation of assessments enabling students to demonstrate their mastery of the materials to earn higher education credit at low cost or no cost.

The Unisa – TESC course adoption process as an exploratory case study

In 2012, the University of South Africa (Unisa) created the blueprints for a university-level course in Critical Reasoning, and Thomas Edison State College (TESC) in New Jersey began the process of adapting the course and creating a stand-alone assessment through its credit-by-exam program.

Over a two-year timeframe, the adoption and adaptation process involved collaboration between the two institutions, as well as independent work on the part of each: at Unisa, to complete the course from the original set of blueprints; at Thomas Edison, to convert the course into multiple formats that would be aligned with US accreditors' curricular requirements, with its own program- and course-level requirements, and that would be well-suited to a single end-of-course assessment. This meant creating equivalents to Unisa's in-course assignments and projects (such as micro-blogging and creating a journal) that would be appropriate in a written exam, but also ensuring alignment with the institution's General Education outcomes for critical thinking. For Unisa's part, the work involved completing the Critical Reasoning course in a manner that followed its own instructional design processes but also could be usable by other institutions.

The processes described for localization and accreditation of the Unisa open course in a transnational context at TESC were a first step within the OERu partners’ network to test the viability of the model. We are now in a position to reflect on this case and examine more closely the activity systems that interacted, with a view to expediting subsequent adoption, localization and accreditation processes within the OERu and among institutions that may wish to follow similar implementation patterns in a transnational or regional context.

Exploring the Unisa-TESC process using an activity theory lens

The researchers used Activity Theory (AT) to retrospectively explore activities within a cultural-historical and social setting – referred to as an activity system. Engeström (1987) formulated a model of the structure of activity systems that included the subject, object, instrument (tools), division of labour, community, and rules. Engeström (1987) provided a structural map of activity systems that describes the interacting elements.

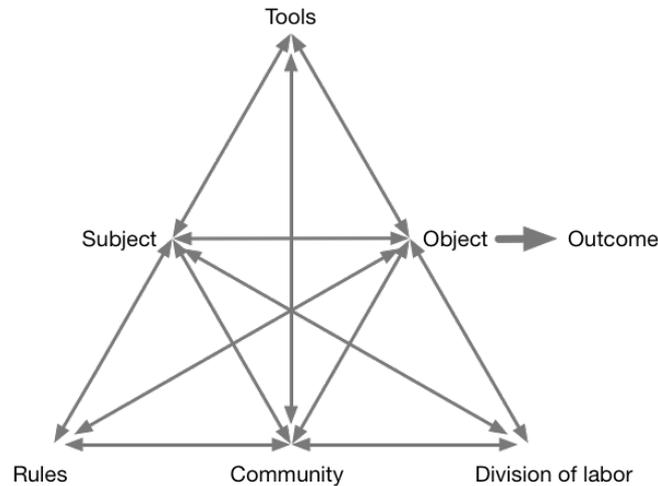


Figure 1: Structural map of the activity system (Engeström, 1987).

Activity theory (Engeström, 2001) is a framework that allows researchers to analyze human interactions with technologies, systems, rules and practices, and was used as a lens through which to explore the transnational course adoption and accreditation processes that involved TESC and Unisa, in the context of the OERu partner network.

Murphy and Rodrigues-Manzanares (2008, p. 443) and Barnard (2010) provided clear explanations of the activity theory framework that were useful to the researchers in exploring the activity systems under study in the OERu context.

- The subject of an activity system is the individual or group whose viewpoint is adopted.
- Object “refers to the ‘raw material’ or ‘problem space’ at which the activity is directed and which is molded or transformed into outcomes with the help of physical and symbolic, external and internal tools” (Engeström, 1993, p. 67). It precedes and motivates activity.
- Tools mediate the object of activity. They can be external, material (e.g., a textbook, a computer) or internal, symbolic (e.g., language). Tools take part in the transformation of the object into an outcome, which can be desired or unexpected. They can enable or constrain activity.
- Community refers to the participants of an activity system, who share the same object.
- The division of labour involves the division of tasks and roles among members of the community and the divisions of power and status.
- Rules are explicit and implicit norms that regulate actions and interactions within the system (Engeström, 1993; Kuutti, 1996).

Examining complex systems within higher education usually requires us to consider many interacting factors that occur simultaneously within activity systems, in this case involving the interactions between partner institutions and the overarching OERu consortium model.

AT also provided a conceptual framework for discussion that the researchers used to explore interactions among the partners in authentic settings to accomplish tasks that were key to the OERu partnership arrangements they sought to operationalize.

The role of contradictions in Activity Theory

A key principle within activity theory is the role of contradictions. Contradictions commonly develop as a system develops over time. When a new activity is introduced into the system internal 'primary contradictions' result in "aggravated secondary contradictions where some old element collides with a new one..." (Engeström 2001, p.137). Contradictions are present and are crucial driving forces of transformation according to Engeström and Sannino (2010). Articulating the location of these contradictions in the system and overcoming them can transform the activity. And it is this last point that we believed might provide us with some guidance for the OERu partners as they plan to expand and implement broader examples of free courses with low-cost credentialing processes for students worldwide.

Authentic workplace settings include contextual elements that interact as individuals and communities work toward an outcome, such as a change in practice—for example the adoption of an open course model for online delivery and accreditation within an institution, and in this case within another institution, different from the institution that developed the original course. This scenario is a stated goal of the OERu higher education partners that wish to offer low or no-cost educational access to courses and accreditation using OER and on-demand assessment. We were keenly aware that contradictions might appear in this context and we hoped to probe the activity systems for any contradictions that emerged.

Our case study method

To retrospectively explore the experiences of participants in the case study, the researchers used a sequential exploratory design. We arranged a set of semi-structured interviews with participants from each of the organizations, TESC and Unisa, as well as with OERu founders. Table 1 is the interview guide that was created for use with all of the participants.

The questions were ordered in a manner that asked the participants to describe their historical knowledge of open educational resources and open courseware, as well as the manner in which they were introduced to the vision for OERu. Subsequent questions explored aspects of the process of creating and using open educational resources within the context of the OERu partner network and within their individual institutional cultures. Additional questions explored instructional development, course adaptation, quality assurance, assessment and credit granting processes within the institutions, in the context of OERu. Tools, rules, communities of practice, and the division of labor, were also explored through the participants' experiences within their institutions and within the larger OERu partnership.

The interviews were digitally recorded for subsequent analysis using the AT framework developed by Engeström for the study of interactions within work environments. Our analysis of participant responses and our discussion of those responses are presented in the Results and Discussion section of this paper.

Interview questions

We used a semi-structured interview guide in our conversations with OERu, TESC and Unisa participants in the exploratory study. Table 1 presents the question framework we used.

Table 1. Interview questions and their alignment with Activity Theory constructs.

Interview Questions	Associated Activity Theory Structures
<p>When and how were you first introduced to open educational resources (OER) and open practices?</p> <p>How do you see “open” practices and open educational resources (OER) fitting into a higher education system?</p> <p>In the context of OERu, please speak about your vision for the network of OERu partners and what they might be able to achieve?</p> <p>How do you see OER benefitting your country’s educational system, its / your institution or students?</p>	<p>SUBJECT</p> <p>OBJECT</p> <p>OUTCOME</p> <p>OUTCOME</p>
<p>Courses and programs will be central to operating a network of OERu partner institutions. How would you see the partners going about the process of open program and course development for themselves and in collaboration with OERu?</p> <p>How do you see institutions or organizations being set up to handle OER development, integration, and use? Describe the optimal structure. What issues/challenges do you see?</p>	<p>COMMUNITY</p> <p>DIVISION OF LABOUR</p>
<p>What issues have you identified in the OERu partner network’s ability to collaborate with others outside their institution? Government, other institutions, OERu, external accreditation bodies?</p> <p>How should an OERu collaborative network optimally function?</p> <p>How might you envision a collaborative approach to OER development and implementation?</p>	<p>COMMUNITY</p> <p>RULES</p> <p>DIVISION OF LABOUR</p>
<p>What quality assurance processes and issues might affect the adoption and use of open courses within the OERu partnership?</p>	<p>RULES</p> <p>COMMUNITY</p>
<p>What important instructional development practices and issues are entailed in the adaptation of open curriculum materials (OER) or use in specific localized contexts in post secondary institutional settings and programs?</p>	<p>RULES</p> <p>DIVISION OF LABOUR</p>
<p>To what degree does established technical infrastructure and related practices affect the potential for OER reuse in institutional settings?</p>	<p>TOOLS, INSTRUMENTS, MEDIATING ARTEFACTS</p>
<p>How effective has OERu communication process been with and within your institutions in the partner network?</p>	<p>COMMUNITY</p>
<p>What did you learned about working with OERu partner institution as they have approached the OERu development process?</p> <p>What did you learn during the TESC-Unisa course adoption process that may guide your subsequent practices as a part of OERu?</p> <p>How have you incorporated what you have learned into your practices and policies regarding OERu and your organization?</p>	<p>COMMUNITY</p> <p>OBJECT</p> <p>OUTCOME</p>

Results and discussion

We collated interview data from the three groups that were engaged in this exploratory study. What follows are our findings presented through an annotated labeling of the AT triangle that is represented in Figure 2 and a tabular summary of high-level findings presented in Table 2.

Our discussion highlights key synergies emerging from our data that demonstrated common understandings shared by the OERu network partners. In particular we highlighted their understanding of why they were engaged in the OERu network, the objectives they were seeking to achieve at their institutions, and the outcomes that they believed might be achievable across an international partner network.

From the interview data we further explored the understandings shared by OERu founders, who are also Open Education Resource Foundation (OERF) board members, and by the Unisa and TESC partners, with respect to the tools, rules, communities of practice, and the distribution of labour across the partner network. And, it is in this part of the exploration where we began to detect contradictions and collisions of practice that affected engagement among partners and required time and effort to resolve. These contradictions arose primarily in the tool, rules, communities of practice and division of labour dimensions of the activity system we examined.

For the purpose of this exploratory study we annotated the labels of the AT triangle (Engeström, 1987) with detailed descriptions for the kinds of activities and interactions that were present within the OERU activity system. Questions about these dimensions of activity were reflected in our semi-structured interview guide (Table 1) and in our high-level summary of findings (Table 2).

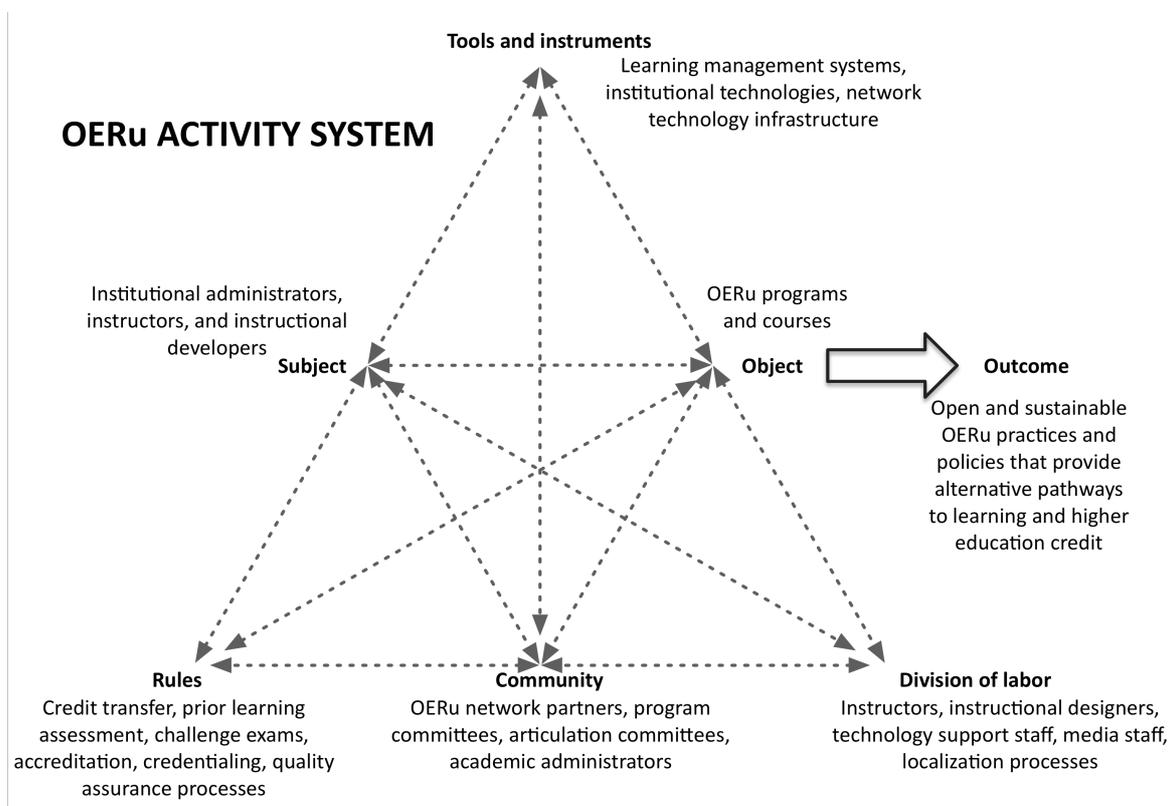


Figure 2: AT triangle annotated with labels that correspond to the OERu activity system.

Summary of high-level findings from interview data

Table 2 provides a summary of findings based on semi-structured interviews. Activity Theory framework elements are used as an organizer for the summary of interview findings.

Table 2: Summary of findings

Activity Theory Structure	OERF board Members	TESC Institutional Participants	Unisa Institutional Participants
<p>Subject Institutional administrators, instructors, and instructional developers</p>	<p>For OERU founders, the OERu concept follows from an open source philosophy and represents a new business model (“a parallel universe”) in higher education that provides a low-cost, collaborative and sustainable access point to higher education courses, assessment and credentials for learners worldwide.</p>	<p>TESC's leaders were introduced to OER and the OERu organization through their research into the means by which the adult learners, who are TESC's primary focus, acquire new knowledge and might apply it to a college degree or credential. TESC views adults as more self-directed than traditional learners, and as such seeks out opportunities to provide students with a range of educational resources at a reasonable cost.</p>	<p>Unisa came to OERu for similar reasons to those of TESC: a desire to develop its own resources and also draw upon those developed by others to create an affordable and scalable approach to content development.</p>
<p>Object OERu programs and courses</p>	<p>Making courses available within the OERu partner network provides a pathway to credentials based on open courseware and on-demand assessment, leading to accessible credentialing. OERu could exist within a conventional HE system as parallel business model in the same way that open source software can exist alongside proprietary software.</p>	<p>For TESC, OERu would provide access to a set of resources that could help its adult learners in the process of earning credit for their knowledge and skills through the Prior Learning Assessment (PLA) process. Most adult learners bring what they have learned with them when they return to higher education, but this learning does not always correspond to the course structure at most institutions. OERu could provide a bridge between prior learning and academic requirements.</p>	<p>For Unisa, OERu would help the institution define and launch its own internal OER policies and practices, in addition to bringing Unisa into contact with an international group of like-minded institutions within the OERu partner network.</p>

Activity Theory Structure	OERF board Members	TESC Institutional Participants	Unisa Institutional Participants
<p>Outcome Open and sustainable OERu practices and policies that provide alternative pathways to learning and higher education credit</p>	<p>If the OERu develops a successful learning and accreditation model based on OER, low-income, marginalized or rural learners will have a low-cost pathway for self-study, assessment and credentialing of courses into programs provided by a network of partner institutions worldwide.</p>	<p>OERu efforts will bring TESC into greater contact with others globally who are working to address similar problems of access and affordability in higher education. TESC also will learn better use of OER as it develops its competency-based degree programs at the undergraduate and graduate levels.</p>	<p>OER will provide access to low-cost materials for study for Unisa's students across the African continent. By working with the OERu organization, Unisa hopes to be able to work with others on larger educational problems and to scale solutions to such problems as students' lack of preparedness for the requirements of higher education.</p>
<p>Tools Learning management systems, institutional technologies, network technology infrastructure</p>	<p>MediaWiki and WordPress provide a common open source platform for course design and delivery. However, some partners have had difficulty with the MediaWiki choice and it may have slowed productivity. WordPress is being tested for future course delivery options.</p>	<p>TESC has used its own technical platform based on Google Docs, which is freely available but not entirely open; instructional designers are comfortable with this platform and reluctant to switch to other tools. This choice serves as one contradiction within the OERu partner network</p>	<p>For Unisa, resources that would allow staff to explore and embrace technological enhancements and new methods are limited.</p>
<p>Rules Credit transfer, prior learning assessment, challenge exams, accreditation, credentialing, quality assurance processes</p>	<p>Existing credentialing and credit transfer processes provide a framework in which partner institutions can evaluate student learning using existing course outcomes and credit equivalencies at their own institutions, where students seek credit for learning via OERu.</p>	<p>TESC has a very liberal policy regarding transfer credit and use of PLA; in fact, a significant percentage of students earn a degree without ever taking a TESC course. Various methods and modes of delivery, primarily online, are offered to allow students to earn credit. Nonetheless, the regional accreditation body that governs TESC does not permit articulation with international institutions.</p>	<p>South Africa is working toward a national policy regarding credit for prior learning as part of its qualifications frameworks, but international transfer may be difficult to manage, especially outside of Africa.</p>

Activity Theory Structure	OERF board Members	TESC Institutional Participants	Unisa Institutional Participants
<p>Community OERu network partners, program committees, articulation committees, academic administrators</p>	<p>Members of the community bring a like-minded attitude about openness and access to learning and course credit. However, partners are varied in their models of practice and levels of understanding about OERu.</p>	<p>Leaders of TESC’s interest in getting involved in OER and OERu considered the consortium an opportunity to share ideas and best practice about OER with partners both within the US and internationally. Internally, administrators and staff members like the idea of OER but express concern about adopting a new model of course development that requires consideration of an additional source of instructional material: open resources</p>	<p>There is a conceptual challenge with OERu because it may not provide a sufficient value proposition for academics to get them excited. Current approach of OERu doesn’t do anything to transform pedagogy. Therefore, it’s been a challenge with Unisa regarding OERu participation Need to aggregate individual efforts – right now we are displacing energy instead of consolidating it. The power of OERu – this is what we would want available. We don’t know how to construct a self-study in accounting for a student with an educational deficit. The value of OERu would be in solving educational problems—we are wasting energy on individual efforts when we should be focused on consolidating efforts.</p>
<p>Division of labour Instructors, instructional designers, technology support staff, media staff, localization</p>	<p>An OER working group structure was originally viewed as a key mechanism for distributed activity among OERu partners. However, working groups may need additional leadership, commitment and action in 2015.</p>	<p>Work on OER is spread across two units within the Academic Affairs division at TESC: the Center for the Assessment of Learning, which focuses on PLA and non-traditional assessment, and the instructional design unit within the Center for Learning and Technology. The two units work closely on many occasions but have differing priorities regarding OER.</p>	<p>Unisa’s work on OERu is currently stagnant because of capacity issues. Sometimes priorities take precedence over passions.</p>

Key synergies among OERu partners that emerged from our findings

Subject: The driving vision of the partners

Above all, the key synergy emerging from the OERu partner network was the affirmation of like-mindedness. This was an attribute that the OERu founders hoped would guide and bond together a network of universities worldwide that saw an opportunity to provide sustainable, low-cost pathways to credit based on self-study and on-demand accreditation for learners in diverse locations and situations.

According to an OERu founder and Open Education Resource Foundation (OERF) board member,

“For me, the whole issue around open education is at two levels. One, it's a values commitment by an organization, or by an education institution at the level of the primary purpose of ... Well, certainly the public-funded education system, and the academic values on which the formal education system is based, is this notion of sharing knowledge.

The primary purpose of teaching, and in fact research, is to share knowledge. There's a very strong linkage between the core values of what the public education system is about and the whole OER movement. That is one component, which I think is arguably the most important aspect of the integration of open education in tertiary education.

The second is purely an economic perspective around improving efficiencies of tertiary education. We know the world over, that the traditional model of higher education provision, at least from an economic sustainability point of view, is fundamentally broken. No sector in society who has seen an increase in the cost to its consumers over the last decade, greater than the inflation index, is sustainable. The open education movement is a part of an ecosystem that can move higher education to more sustainable futures.” --OERF board member

For TESC, the impetus for its OERu involvement was aligned with its institutional mission of providing self-directed learners with access to study materials that could lead to academic credit and credentials at “reasonable cost.”

TESC's leaders were introduced to OER and the OERu organization through their research into the means by which adult learners, who are TESC's primary focus, acquire new knowledge and might apply it to a college degree or credential. TESC views adults as more self-directed than traditional learners, and as such seeks out opportunities to provide students with a range of educational resources at a reasonable cost. –TESC staff member

In Unisa's case, the attraction of OERu membership was similar to the motivation of OERu founders and the reasons for OERu membership cited by TESC, but also included Unisa's desire to develop its own resources as well as draw upon those developed by others, to create an affordable and scalable approach to content development.

Object: The goals of the partners

With respect to the goals of the three subject groups who were participants in the OERu partner network, their guiding motivations were congruent with the vision of OERu, including their desire to fulfill a primary objective of the partner network, which was to develop open courses that could be accredited locally and transnationally.

There was also alignment along the AT object dimension among the three partners in the study, but each emphasized the object slightly differently when viewed from an OERu context and from within their institutional context, with its own mission and goals.

For OERu founders the key objective of the partnership was making a variety of courses available across the network for use by learners who could request on-demand assessment from member institutions. In the case of the OERu founders there was a belief that such a process was within the parameters of most institutional policies, practices and precedents. One OERF board member stated,

In the original paper called “Creating a Parallel Universe,” because I knew that you can't take on the complexity of the Higher Ed system as a whole, so the way the paper was written in my concept was that you could run this in parallel with the main stream, in a small number of courses, in a large number of institutions, which was the model.

Through that, we've gained experience and expertise in managing that sort of collaboration. Then we could start to filter in, if you like, to the main business model. Once we demonstrate that a proof of concept, in an authentic collaboration, then I think we're in a much better position to have an impact on the mainstream. That was essentially my thinking behind this. –OERF board member

In TESC's case the OERu offered the potential of a ready-made set of open courseware that could be adapted for use with learners who typically approached TESC for on-demand assessment. The fact that the OERu courses would align with recognized university curricula from partner institutions meant a potentially smooth fit with its existing business model.

For TESC, OERu would provide access to a set of resources that could help its adult learners in the process of earning credit for their knowledge and skills through the Prior Learning Assessment (PLA) process. Most adult learners bring what they have learned with them when they return to higher education, but this learning does not always correspond to the course structure at most institutions. OERu could provide a bridge between prior learning and academic requirements. –TESC staff member

For Unisa, OERu would help the institution define and launch its own internal OER policies and practices, in addition to bringing Unisa into contact with an international group of like-minded institutions within the OERu partner network. This was a slightly different objective than for TESC, but a valid motivation for participation in OERu, whose partners have varied experience in using OER, and where the partner network could contribute courses to a common pool for learners, and also build new expertise among the partners from the interactions around development, assessment and credentialing of open courses.

Outcome: Potential to build a sustainable OER learning and accreditation framework

The potential to build and operate an OERu consortium based on open and sustainable practices and policies that provide alternative pathways to learning and higher education credit for learners worldwide is the long-term vision of the OERF board members. The OERu vision is seen as an achievable and necessary outcome, particularly if the network seeks to function within the higher education system by building on existing precedents for course articulation, assessment and transfer. However, OERu can only exist if it incrementally develops using an agile process supported by an external body, as described by an OERF board member.

Okay, so one of the reasons or driving forces why I set up the Foundation as an independent entity was because of a number of failed innovations. All the failed innovations I've been engaged with were attempts within organizations to transform or improve practice, which never succeeded. With the establishment of the OER Foundation we set this up outside of the traditional institutions, but in a way that could enable partner institutions to innovate in an incremental way.

In hindsight, it's been a good strategy because at the level of the Foundation we are very agile, we can move quickly, we can take decisions, we can implement at a rate, which is typically faster than the average university. I think it's a classic win-win type of scenario, where individual institutions are able to innovate with the help of an independent agency outside the organization, because for our individual partners, it's low risk, it's a low-cost kind of innovation, but potentially high impact. What the networking model does for us is the classic—the whole is more than the sum of the parts. At the individual institutional level this sort of commitment and exposure is relatively low in terms of risk, but collectively the returns are potentially quite big. Yeah. –OERF board member

Unisa and TESC also saw the value in being members of an international partnership that involved higher education institutions working together to solve common problems using open solutions, and especially those that widen access to learning and accreditation at lower cost, and potentially at scale, in the case of Unisa.

OER will provide access to low-cost materials for study for Unisa's students across the African continent. By working with the OERu organization, Unisa hopes to be able to work with others on larger educational problems and to scale solutions to such problems as students' lack of preparedness for the requirements of higher education. –Unisa participants

TESC saw the network of OERu partners as contributing to open course frameworks and OER-based curricula that would be useful for organizing assessments of learning.

OERu efforts will bring TESC into greater contact with others globally who are working to address similar problems of access and affordability in higher education.

TESC also will learn better use of OER as it develops its competency-based degree programs at the undergraduate and graduate levels. –TESC staff member

Contradictions also emerged from the study

While like-mindedness has worked as an initial synergy for bringing together partner institutions, there are other components of the OERu vision and operational model that are considered key attributes of OERu by OERF board members. These attributes include open collaboration, fully transparent practices, and a need for institutions to work as part of a distributed network of practitioners. Some of these attributes may not be fully understood by all partners, or may be at odds with practices or viewpoints from partner institutions. Such differences constitute contradictions within the AT framework. The identification and resolution of contradictions may offer opportunities for further strengthening of the partnership. Examples of contradictions that have emerged within the OERu case under study follow in the discussion.

Object: Building a robust set of OERu programs and courses as a primary need for the OERu network

The biggest contradiction noted through the interview process was the current lack of a match between the OERu vision (as noted above, a consortium based on open and sustainable practices and policies that provide alternative pathways to learning and higher education credit for learners worldwide) with the actual creation of a robust set of programs, courses and assessment processes that would give life to this vision and fully actualize the consortium of over 30 higher education institutions.

An OERF board member was clear in acknowledging this contradiction and the need to quickly resolve it.

I'll say this, it's a really critical year, in terms of the fact that we've had a soft launch and we've got partners. We've got a few micro courses and bits and pieces. I think until we can get a commitment from the partners through the institutional action plans, and then draw that together in a curriculum and a program for marketing, as we discussed, then I think we are on the edge of losing credibility for the concept. – OERF board member

A proposed solution to this problem of curriculum and resource development would be to require each partner institution to specify its commitments for course development and human resource contributions and a development timetable for programs and courses to meet OERu network goals. An institutional action plan (IAP) has been proposed and approved by OERu institution CEOs as a mechanism for resolving this contradiction (OERu, 2014).

Tools: Finding common technical ground across a diverse partner network

From the outset, there has been ongoing discussion in the OERu network about adopting a toolset for use by a diverse set of international partners that may already have their own content development and learning management systems (LMS) in place.

From the genesis of OERu project, the MediaWiki software available through the Wikieducator website has provided a common open source software platform for course design and, in some cases, course delivery. The Wikieducator website has also been the site for managing strategy and operational documentation for OERu partners because of its public visibility, which contributes to the openness and transparency that OERu promotes. However, lack of familiarity with MediaWiki, and the need to learn how to effectively author within

this software system may have affected productivity for some OERU partners. Additionally, the organization of the site has proved challenging to navigate for some users.

While there are many positive aspects to the Wikieducator common platform for planning and development, the system is not considered optimal as course delivery platform. As a consequence there is ongoing development to begin to harness Word Press, an open source software system, as a future delivery platform. The OERu founders and many partners are familiar with the issues surrounding platform choices.

TESC has used its own technical platform based on Google Docs, which is freely available but not entirely open, because its instructional designers were comfortable with this platform and were reluctant to switch to other tools. This choice serves as another contradiction within the OERu partner network—common tools may not work for all institutions.

For Unisa, resources that would allow staff to explore and embrace technological enhancements and new methods have been limited. As a consequence Unisa had not been a fully engaged participant in the OERu network, beyond the TESC-Unisa course development and conversion processes to meet a specific institutional need.

On the whole, OERu founders and OERF board members who participated in this study were familiar with the technology and tools issues and also saw them as potential contradictions within the activity system. One commented,

I also see that the technology group, while they've done a lot of work, we really need to get as much closure on how we are going to manage those issues and what sort of advice we're going to give. There's been a bit of resistance to Wikieducator or MediaWiki as a platform, and a fair bit of commitment towards WordPress and the like.

If you throw into that mix, I mean that's just within the OERu interaction. You throw into that mix, the range of learning management systems and other interface problems with administrative systems and the like; it is a bit of a challenge. –OERF board member

However, another board member believed it wouldn't be strategic for the OERu to specify a standard platform for delivery of open courses. He believed the network would have to honor the technology choices made at individual member institutions.

If we look at the fundamentals of this, realistically there is very little chance that we will succeed as the OERu in changing the decisions relating to local learning management systems or local technology infrastructure, that's something that's not going to happen overnight. What that means for us is it's not productive or a smart strategic technology decision for the OERu to have a single learning management system. –OERF board member

The OERu technology systems are undergoing further development and refinement with a view to improving both functionality and user engagement. However, this particular issue within OERu remains a contradiction to be resolved, and a clear solution or consensus approach needs to be agreed by all partners.

Division of labour: Building a virtual team takes effort

The current missing ingredient as it were, is the work on the program, we've had a working group on that, and it did come up with a structure. I think we've almost reached that point now. I have high hopes for the institutional action plans (IAPs) that are being completed at the moment.

What I think we need to do is move quickly. Try and get a closure on it from institutions about which courses and they will be available, and then put that into a framework that would make a meaningful program. I still think the Bachelor of General Studies or a common foundation first year has enough structure in principle, to do it.

I think we just need to complete that and move on with it, and try and market that and see if we can get students to engage with that model, with different pathways into the mainstream. That's the key element. –OERF board member

One additional contradiction in need of resolution involves the division of labour, not only among the participating institutions and the OERu administration, but also within each institution. In the case of TESC, for example, several organizational units are involved in the development of courses and assessments, as well as in adapting course materials for use in the College's systems and delivery methods. It is rarely the case that materials shared with other institutions are acquired from outside the established course development system.

While it might seem that the acquisition of such materials via OERu might facilitate development of courses, in fact it had the opposite effect, as standard review regimens were upended or circumvented, and the usual authority that is brought to bear from the various curriculum committees, academic councils, and deans was called into question. The result was a collective uncertainty at each stage of development and adaptation of the Unisa materials by TESC, which lengthened the process to more than double the usual process. Likewise, in Unisa's case, most guidelines for course development emanate from the national governing bodies in South Africa, and this top-down model must be accommodated before any consideration of the OERu model can occur.

Conclusions

Using the experiences both of the Unisa and TESC teams, the researchers believe that the contradictions that emerged, when accounted for as part of the OERu adoption and adaptation process, can be identified and effectively navigated and harnessed as part of a new and stronger process, as additional courses and institutions move through the process. While each institution will have its own activity system and internal processes, and as such these processes and systems will interact with those of partner institutions in unique ways, awareness of these contradictions can strengthen the potential for such interactions to be transformative in a positive and cumulative way. Whether these contradictions can be addressed or resolved in each case will need additional consideration on the part of the OERu network and the participating institutions. Ultimately, the researchers believe that identifying the opportunities inherent in this exploratory case study can illuminate ways in which a network of like-minded institutions can work together to expand and build upon the strengths of each member, as OERu.org broadens its reach to include the development of entire programs of study.

References

- Barnard, R. (2010). Activity theory: a framework for analyzing intercultural academic activity. *Actio: An International Journal of Human Activity Theory*, No. 3, 2010. Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/4354>
- Engeström, Y. (1987). Learning by expanding: an activity-theoretical approach to developmental research. Helsinki: Orienta-Konsultit. Retrieved from <http://lchc.ucsd.edu/mca/Paper/Engeström/Learning-by-Expanding.pdf>
- Engeström, Y., Brown, C., Christopher, L.C., & Gregory, J. (1991). Coordination, cooperation and communication in the courts: expansive transitions in legal work. *The Quarterly Newsletter of the Laboratory of Comparative Human Cognition*, 13 (4), p. 88-97.
- Engeström, Yrjö, Miettinen, R. and Punamäki, R-L (Eds.) (1999) *Perspectives on activity theory*. Cambridge, MA: Cambridge UP.
- Engeström, Y. (2001). Expansive learning at work: toward an activity theoretical reconceptualization. *Journal of Education and Work*, 14 (1), 133-157.
- Engeström, Y. & Sannino, A. (2010). Studies of expansive learning: foundations, findings and future challenges. *Educational Research Review*, 5, 1-24.
- Murphy, E., & Rodriguez-Manzanares, M. (2008). Using activity theory and its principle of contradictions to guide research in educational technology. Retrieved from <http://www.ascilite.org.au/ajet/ajet24/murphy.htm>
- OERu.org (2014). Report of the 2nd meeting of the OERu Council of Chief Executive Officers. Sydney Business School. University of Wollongong, Nov. 4, 2015 Retrieved from http://wikieducator.org/OERu/OERu_14.11_Council_of_CEOs/Report
- OERu.org. (2015). OERu organisation FAQs. Retrieved from <http://oeru.org/organisation-faqs/>
- Taylor, J.C. (2007). Open courseware futures: creating a parallel universe. *E-Journal of Instructional Science and Technology*, 10 (1). Retrieved from http://ascilite.org/archived-journals/e-jist/docs/vol10_no1/papers/full_papers/taylorj.pdf

License and Citation

This work is licensed under the Creative Commons Attribution License <http://creativecommons.org/licenses/by/3.0/>. Please cite this work as: Singer, M. & Porter, D.A. (2015). **Exploring the process of using OER to build transnationally accredited courses within the OERu partner network - an activity theory perspective**. In Proceedings of Open Education Global 2015: Innovation and Entrepreneurship.