

OPPORTUNITIES AND OBSTACLES FOR OPEN EDUCATION

Trotter, Henry;

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AFRICA

Opportunities and obstacles for open education

Henry Trotter

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Given the social, financial and infrastructural challenges facing many African universities, could the provision of free and open educational materials to students and educators improve higher education provision on the continent?

It's a question that is increasingly being asked, both in Africa and abroad, due to the growing awareness, use and dissemination of open educational resources (OER) – digital materials that can be legally shared without copyright restrictions or cost to the user.

Produced by educators and students, OER form part of a sharing economy that can potentially reduce educational costs and enhance the quality of learning materials through broadening the contributor base and promoting a more participatory approach to knowledge creation.

To understand whether, how and under what conditions OER adoption occurs in the Global South, the Research on Open Educational Resources for Development (ROER4D) project embarked on a four-year research programme with over 100 researchers in 18 sub-projects across 21 countries in South America, Sub-Saharan Africa and South and Southeast Asia.

ROER4D recently published the capstone of its research in a freely available, open access edited volume, [*Adoption and Impact of OER in the Global South*](#), edited by Cheryl Hodgkinson-Williams and Patricia B Arinto.

The book includes chapters discussing OER activity in six African countries: Ghana, Kenya, Mauritius, South Africa, Tanzania and Uganda. Together, they help to illuminate the opportunities and obstacles for African higher education institutions and educators. What they reveal is a diverse and dynamic legal, cultural, financial and pedagogical landscape that shapes OER adoption and impact in a myriad of ways.

One of the key studies in the book – [*“OER use in the Global South”*](#) by José Dutra de Oliveira Neto, Judith Pete, Daryono and Tess Cartmill –

establishes a baseline of OER activity in Africa and across the Global South.

Based on a survey conducted with 295 instructors at 28 higher education institutions in nine countries, the data show that while 56% of the instructors surveyed in South and Southeast Asia have used OER, and 49% of instructors in South America had done the same, only 46% of African instructors surveyed had done so. This is a modest difference, but it reveals that there is still a lot of awareness-raising to be done in Africa, as well as a great deal of untapped potential to be gained from innovation in this area.

Links between development levels and OER

The survey responses regarding OER use in Africa ranged from 35% in South Africa to 49% in Kenya and 53% in Ghana. The fact that South Africa, the most economically developed country by gross domestic product per capita, had the lowest rate of instructor OER use was a surprise to the authors.

In the African context, higher levels of development do not appear to correlate with increased OER use amongst instructors. In fact, the authors argue that it is perhaps the relative lack of 'development' that may have encouraged more Ghanaian and Kenyan instructors to consider the use of OER compared to their South African counterparts.

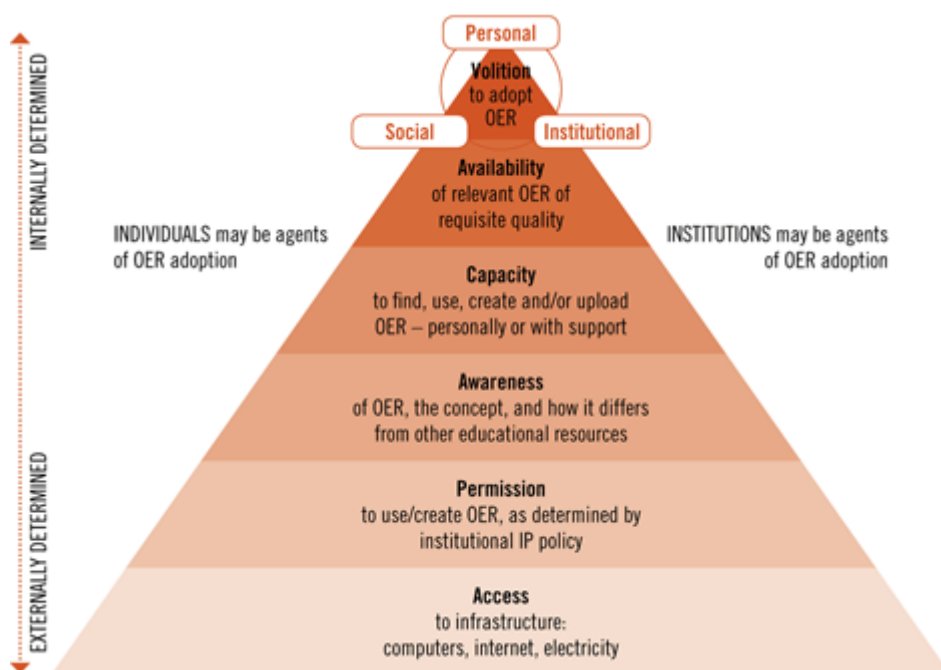
The writers conclude that OER use is predicated upon instructors enjoying a certain minimum level of access to ICT infrastructure – especially hardware and internet connectivity – which, once achieved, can only be described as an enabling factor for OER engagement, but not a motivating factor.

The intriguing South African context is explored in greater depth by myself and Glenda Cox in our chapter ["Factors shaping lecturers' adoption of OER at three South African universities"](#). We focus on understanding the obstacles, opportunities and practices associated with OER adoption at three very different higher education institutions: the University of Cape Town (an urban, research-intensive university), the University of South Africa (a massive distance-learning university) and Fort Hare University (a rural, teaching-focused university).

The chapter demonstrates that whether and how OER adoption takes place at an institution is shaped by a layered sequence of factors: infrastructural access, legal permission, conceptual awareness, technical capacity,

material availability, and individual or institutional volition.

If any of these factors are not present – for instance, if instructors are not aware of OER as a concept – then the educators cannot adopt OER. All of these factors must be positively present for instructors to engage in OER activity. The chapter illustrates this through an OER Adoption Pyramid which allows scholars to assess the OER readiness of their own institutions.



Cox and Trotter's "OER adoption pyramid"

Intellectual property

With the help of this analytical tool, we found that most South African university educators are significantly hindered in the creation and sharing (though not use) of OER by the intellectual property policies at their higher education institutions. Indeed, 21 of South Africa's 26 universities have intellectual property policies which state that the institution holds copyright over materials produced in the course of teaching duties.

Educators therefore cannot share their materials openly because they do not have the legal right to relicense and share them. Unless the university grants them permission to share those materials, or decides to share them itself, it is not permissible for educators to disseminate their teaching materials as OER.

Cox and I also argue that OER activities are influenced by prevailing cultural and social variables, such as a university's institutional culture. In

‘collegial’ institutional cultures, where instructors enjoy a high degree of autonomy (compared to ‘managerial’ or ‘bureaucratic’ institutional cultures), individual volition regarding OER will have a greater influence on OER production than top-down policies.

One of the more dynamic ways in which OER may be used and disseminated is through massive open online courses (MOOCs), an innovation that is now gaining momentum in Africa. In their chapter, [“OER in and as MOOCs”](#), Laura Czerniewicz, Andrew Deacon, Michael Glover and Sukaina Walji report on how instructors’ experiences in the production and rollout of four MOOCs at the University of Cape Town influenced their production of educational materials.

While many MOOCs are not open in the legal sense of the word (in that they are often subject to full copyright) and involve a cost component, the authors were interested to know why University of Cape Town educators wanted to make MOOCs, whether they adopted OER in the MOOC-making process, whether their practices become more open after making a MOOC, and in which ways.

They found that the design component of the MOOC format and the University of Cape Town institutional context (which supports the production of openly licensed content) enabled the MOOC educators to become more cognisant of the technical and legal aspects involved in OER creation. MOOC-making also proved to be a catalyst for both the creation of OER and the enactment of more open pedagogical practices.

Learner-centred approach

The fact that MOOCs often engage large numbers of diverse, lifelong learners resulted in educators adopting a more learner-centred approach to their teaching, which increased their appreciation of the potential value of OER in this regard. The study did, however, demonstrate that the legal issues around content licensing and copyright in OER production remain a challenge for academics to navigate.

Beyond South Africa and the university sector in general, Freda Wolfenden, Pritee Auckloo, Alison Buckler and Jane Cullen explored the use of OER in six teacher education institutions in Mauritius, Tanzania and Uganda, each of which had previous engagement with OER initiatives.

Their chapter, [“Teacher educators and OER in East Africa: Interrogating pedagogic change”](#) examines how and when teacher educators at these study sites engage with OER, the factors that support and constrain

sustained OER engagement, and the influence of this engagement on their teaching practice.

Their findings indicate that teacher educators' understanding and use of OER is highly fragmented, with little traction at departmental or institutional level. At all the study sites there were numerous structural and cultural factors limiting agency with regards to OER use. The demands of curriculum development and assessment, professional identity, digital skills, provision of equipment and connectivity, values and weak cultures of collaboration all exerted an influence and enabled or constrained teacher educators' efforts to achieve agency in terms of OER use.

For a small number of teacher educators (OER 'champions'), OER provides a tool that enables them to move towards more participatory practices. Several of these educators spoke of the formative role of academic training and highlighted the importance of linkages with external OER networks. These elements of historic identity formation influence how they respond to OER and enhance their confidence to move beyond conventional teaching practice.

The study suggests that greater attention should be given to issues of infrastructural access so that educators are able to locate OER more easily and experiment with their use. They recommend that time be made available for educators to enhance their digital skills and to become familiar with principles of learning design so that these become integral dimensions of their professional identity.

What is also required is a deep, extended engagement with OER in order to create opportunities for professional dialogue and collaboration to support the transformation of the teachers' practice.

The research in this book suggests that African higher education would benefit greatly from the integration of OER. The challenges entailed in African educators' use and creation of OER are, however, significant, as they are influenced by legal, technical, cultural and pedagogical factors. The ROER4D edited volume illuminates how these factors currently shape OER adoption in the African context, creating a baseline of empirical evidence that can be built upon to advance this growing field of inquiry.

