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Introduction

This report summarises some state-of-the-art research relevant to open educational resources (OER) and open educational practices (OEP) that was published recently. The reviews of these articles were written by doctoral and post-doctoral researchers who work in relevant fields and are members of the Global OER Graduate Network (GO-GN).

These reviews focus on the relevance of the papers for educational technologists, instructional designers, and educators working in higher education institutions with a particular focus on research into open education.

GO-GN is a network of PhD candidates around the world whose research projects include a focus on open education. These doctoral researchers are at the core of the network; around them, over two hundred experts, supervisors, mentors and interested parties connect to form a community of practice that:

- Raises the profile of research into open education
- Offers support for those conducting PhD research in this area
- Develops openness as a process of research

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Accessibility

Open to Inclusion: Exploring Openness for People with Disabilities

Liyanagunawardena, T. R., Adams, A. A. & Williams, S. A. (2020). Open to Inclusion: Exploring Openness for People with Disabilities. In Conrad, D. & Prinsloo, P. (eds.) *Open(ing) Education: Theory and Practice*. Brill.
https://doi.org/10.1163/9789004422988_008

Reviewed by Paco Iniesto (The Open University, UK)

Authors in this book chapter discuss very conscientiously the aspects that openness brings into inclusion. First defining accessibility (slightly too focused on technical and web accessibility) and presenting definitions of OERs (Open Educational Resources) and MOOCs (Massive Open Online Courses). Authors then combine the existing literature review in accessibility in OERs and MOOCs moving into legal frameworks such as those existent in Ghana, Japan, Sri Lanka, the United Kingdom and the United States. This perspective gives a global perspective turning away from a Global North unique point of view. Authors point out the variety of profiles of OER content creators, which can range from learners through enthusiastic amateurs and professional educators, to world authorities on the topic and how that can impact the quality and accessibility of the content. Then, in the most interesting aspect of the chapter, the authors use four fictional personas: Khalid, Sophie, Arun and Chamari to let the reader explore with them the obstacles they have to overcome in accessing OERs and decide whether the difficulties they encounter may differ had these learners happened to live elsewhere in the world. Their visions help to escalate the discussion about accessibility awareness in OERs to support inclusion, showing the contrast between legislations and cultures and how they can affect accessibility.

Authors agree that disabled learners already face many problems in accessing education, but the increased provision of open resources may or may not benefit them. That is indeed very relevant since it contrasts with the definition of openness of increasing educational inequality between learners, suggesting instead that expanding the provision of open resources can sometimes increase educational inequality between learners. Legislation requires the provision of equal access for all learners. The level of enforcement of such legislation varies in different countries, resulting in unequal opportunities for disabled learners globally. That aspect is more relevant in OERs where there is very little support for disabled learners. Authors propose the development of authoring tools and differentiate between the support

given in MOOCs, which in general are created by institutions with the support of the platform provider. In contrast, individuals can create OER without such support. Fortunately, as the authors report, there are several OERs available to educate resource designers and creators. At the same time, it is relevant to look at the community of learners and their potential to create accessible content in a crowdsourced way. This book chapter is not only interesting for the compilation of sources and the original use of personas. It is also because it raises awareness in accessibility aspects within the Open Education community that do not always align with current accessibility research and help to reflect on the next steps: we need to consider to produce inclusive OERs for all learners.

Accessibility of Open Educational Resources: how well are they suited for English learners?

Rets, I., Coughlan, T., Stickler, U. & Astruc, L. (2020). Accessibility of Open Educational Resources: how well are they suited for English learners? *Open Learning: The Journal of Open and Distance Learning*. <http://oro.open.ac.uk/70272/>

Reviewed by Paco Iniesto (The Open University, UK)

Authors in this paper examine the readability of 200 OERs in English from two major OER course platforms (OpenLearn and Saylor Academy). The paper starts with the definition of OERs followed by the researchers, which comprise those provided by William and Flora Hewlett Foundation and UNESCO. Authors highlight the prevalence of OERs in English and the barrier that this imposes in terms of making OERs accessible to all those for whom the linguistic complexity of the English language used in OERs can be a concern. Since translating OERs would require much additional work on the part of OER platforms. Authors propose the reduction of linguistic complexity of OER reading materials to improve their understandability as a plausible solution for all those using English as Second Language (ESL), which is the case of many academics like the one writing this review.

The methods proposed include a selection of OERs at different educational levels and subject categories using inferential statistics and cluster analyses. Metrics include, among a total of 22, average sentence length, counting syllables per word and per sentence, reading ease, noun elements and logical connectives. The proficiency level was measured using the Common European Framework of Reference for Languages Learning (Council of Europe, 2001). The authors intelligently make it clear that the aim of this study was not to compare the platforms. Because also the platforms differ in the way that they structure subject

matters and levels, pointing out that the use of multiple platforms is a means to assess whether the patterns in the findings are consistent and generalisable.

Authors claim in their results that there is a progression of difficulty between lower and higher educational levels with introductory courses being easier to read. However, the authors' analysis also highlighted that more than 86% of the courses require an advanced level of English language proficiency. As well authors suggest subject matter does not appear to be linked with the readability of the courses.

This paper covers a rarely researched space in the area of open education. It certainly seems complicated as the authors themselves confirm as a limitation that there is no standard combination of readability tests or consensus on the readability metrics that should be used to evaluate the difficulty of the text. Any reader at this point is eager to follow the progress of this research to produce guides that can help to generate more accessible use of English for all readers. Even how those guides could be applied to other languages. In a certain way, some doubts that arise as a reader is how said work would be applied in practice to topics that may be complex or very specific, and therefore even tricky for native readers. Also, how writers are going to change their writing habits by being aware of how they can help their readers to understand the content better. This is an investigation to keep track of. To finalise, I guess I cannot avoid wondering why *Open Learning: The Journal of Open and Distance Learning* is not an open journal with its name.

Accessibility within open educational resources and practices for disabled learners: a systematic literature review

Zhang, X., Tlili, A., Nascimbeni, F. et al. (2020). Accessibility within open educational resources and practices for disabled learners: a systematic literature review. *Smart Learning Environments* 7, 1 <https://doi.org/10.1186/s40561-019-0113-2>

Reviewed by Paco Iniesto (The Open University, UK)

This paper claims OERs and OEPs (Open Educational Practices) have the potential to facilitate meeting the needs of disabled students to increase their accessibility and e-inclusion capabilities in educational settings. It is sure there is limited research to date and that it has provided a limited understanding of accessibility within OER and OEP to aid researchers in pursuing future directions in this field. Authors start their paper with a comprehensible argumentation about the potential of OERs and OEPs following UNESCO and United Nations agendas for sustainable development. Authors coherently consider the impact that their inclusion in institutional policies would bring in terms of accessibility in a broad sense of the term. Then it is time for

the definition of accessibility which is limited to the framework from the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3), which limits accessibility to a web technical aspect missing its educational or pedagogical context much needed in OERs and OEPs. On the other hand, it helps to frame authors' research following the four principles of the Web Content Accessibility Guidelines (WCAG): Perceivable, Operable, Understandable and Robust.

The search for the systematic review included databases such as ScienceDirect, Wiley Online Library, IEEE Xplore Digital Library, Core Collections of Web of Science and Taylor & Francis Online. Authors reviewed 31 papers, from a total of 1617. In the process sensible criteria to select the papers excluded those that were not in English, did not discuss openness using OER and OEP for learning accessibility, did not focus on disabled students or did not have available full text online. Authors then disclose the results by year, countries, keywords which seem not very relevant information to a reader interested in accessibility. More appealing is the distribution of papers according to disability type, which shows the lack of disabilities specification in research or if specified there exists a preponderance of visual and hearing disabilities. Other disclosed aspects include the predominance of OER systems design and frameworks and the use of various accessibility evaluation methods to check WCAG.

Finally, the authors disclose the 31 papers following the four WCAG principles referred to previously. The results obtained highlight that accessibility is still an area that needs more research within

OER and that researchers should focus more on considering the four accessibility principles within WCAG. However, these principles are mostly technical and have limited impact on evaluating pedagogical aspects. More relevant is the claim that limited focus has been given to assistive technologies using OERs. Authors finally claim to provide several recommendations to increase accessibility within OER and help design more accessible OER. Those recommendations include more international researchers getting involved in this research field; more research on authoring tools to produce OERs; further research should be conducted to investigate the effectiveness of OER and OEP in providing accessible learning experiences. Researchers should apply learning analytics to flag accessibility barriers. This paper, therefore, points out several areas which seem relevant to consider in future research about accessibility and OERs/OEPs. This type of research is very valuable to raise awareness within the open education community. However, the number of papers analysed is reduced and the framework is limited to technical aspects.

Adoption Studies

Open Textbooks: Quality and Relevance for Postsecondary Study in The Bahamas

Bethel, E. (2020). Open Textbooks: Quality and Relevance for Postsecondary Study in The Bahamas. *The International Review of Research in Open and Distributed Learning*, 21(2), 61-80. <https://doi.org/10.19173/irrodl.v21i2.4598>

Reviewed by Glenda Cox (University of Cape Town, South Africa)

The quality of open teaching materials is considered a barrier to adoption of these materials by faculty. There are different views around whether quality assurance should be part of the production of open materials and or whether it should be up to the author or user of the materials to assess quality. This paper provides an excellent and easy to use method of assessing the quality of open textbooks. The open textbooks are from repositories in Canada and North America. The open textbooks were measured to check how relevant they are for use in the Bahamas. This is useful empirical work that open textbook advocates and researchers in higher education institutions in developing countries can use to make an argument that Global North texts, especially in the Sciences can be used in their classrooms.

The quality measurement tool has four measures; pedagogy, openness, accessibility, and relevance. Pedagogy is divided into 5 items adapted from the TIPS framework (Kawachi, 2014). This is a useful checklist for designers of open materials. Relevance is also a particularly useful category and the open textbooks were rated against local higher education course outlines and topics. This kind of mapping is needed to promote open textbooks and assist OER advocate and/or librarians who are trying to locate relevant textbooks. The open textbooks matched well to the course outlines and topics. The paper includes the research instruments.

Textbooks were chosen from Openstax CNX and BCcampus OpenEd repositories. A total of 41 textbooks were evaluated. Coders rated the texts according to the four measures.

Pedagogical quality varied. Most of the texts scored highly as they had set out clear learning objectives, diagrams and graphs, activities and practice exercises. The texts were also checked for post-assessments and those that scored highly in the other areas also had some form of assessment. One pedagogical measure was whether there was any pre-assessment, but few texts scored highly in this area. Texts used Creative Commons licences and only one textbook was not free. Texts were

available in various formats. On average 74% of the texts matched with local content.

The paper ends with a list of recommendations for future advocacy work including awareness raising, faculty capacity building and exploring current faculty textbook use. The author also intends to continue testing and validating the quality tool.

Institution initiatives and support related to faculty development of open educational resources and alternative textbooks

McGowan, V. (2020). Institution initiatives and support related to faculty development of open educational resources and alternative textbooks. *Open Learning: The Journal of Open, Distance and e-Learning*, 35:1, 24-45, DOI: 10.1080/02680513.2018.1562328

Reviewed by Glenda Cox (University of Cape Town, South Africa)

McGowan (2020) provides us with a very useful and timely analysis of institutional support for OER and open textbooks. The study is situated in the US but it is nevertheless useful for researchers, faculty supporting OER and advocates globally. It provides a first attempt to find themes and analyse how various higher education institutions have used grants and other forms of support to enable OER use, adaptation and creation. The paper argues for the need for institutional support to encourage the use and creation of OER including open textbooks.

The author has completed a content analysis of the websites of 37 higher education institutions in the US. This quantitative study then develops a comprehensive set of themes which in turn have variables (also called factors) that are clearly described.

This paper tries to achieve a lot in summarising what seems to be a huge amount of data and hopefully future papers by the author will get into more detail about certain aspects as sometimes it feels like the author moves over interesting findings very quickly.

One recommendation is to consider tightening up the definition of open textbooks and the use of open/alternative and affordable is a descriptor. It is very important to always emphasise the open licence as the basis of open. Alternative and affordable do not imply openly licenced. The author provides some evidence that "open models are less sustainable than low cost models" .

The paper includes many interesting findings, highlighting some that need further research. Student savings are still an important argument for the use of open textbooks but the savings and cost of producing these OER is tricky to calculate and there is a need for studies with more data. Grants given were mostly for OER designed to support initiatives designed and created for high need programmes. Those programmes will have the most impact on student graduation. Grant criteria did not seem worried about past OER experience. It seems that institutions presumed faculty would not be OER and/or that there was a lack of copyright and fair use training at institutions. The author states that 51% of grants required an orientation which presumably would include some training in Creative Commons or other open licenses. Perhaps surprisingly, quality was not a concern. Despite the attempts of disability units to raise awareness of the need to consider accessible formats, accessibility was also not a priority and was not specified as a criterion. Grants were managed by teaching units or the library. The author felt there was some tension there and perhaps these should be handled by one or the other. Institutions manage these grants differently and perhaps what is most important is that these units work together where necessary. The author also discusses the debate around the creation of OER being intrinsically or extrinsically motivated. There are examples where authors create OER with no grant support and this is an intrinsic motivation.

This paper is a very useful description of institutional grants supporting OER. It fills an empirical gap and although the author concludes that more detail is needed around how institutional support can enable OER, this paper provides a robust model for institutions to consider and for researchers to apply in order to better understand the nature of these grants

The cathedral's ivory tower and the open education bazaar – catalyzing innovation in the higher education sector.

Rabin, E., Kalman, Y. M. & Kalz, M. (2020) The cathedral's ivory tower and the open education bazaar – catalyzing innovation in the higher education sector. *Open Learning: The Journal of Open, Distance and e-Learning*, 35:1, 82-99, DOI: 10.1080/02680513.2019.1662285

Reviewed by Marjon Baas (Leiden University / Saxion UAS, Netherlands)

In this conceptual paper the authors examine if open education will replace traditional higher education or whether it will augment it. Most often the replacement narrative is applied in which it is stated that open education will

replace traditional higher education, but the authors propose an alternative narrative in this paper. They do this through the use of Raymond's (1999) metaphor of the cathedral and the bazaar. The authors state that ("cathedral") higher education institutions (HEIs) that wish to successfully cope with the changes that we are facing as a society should not be threatened by "bazaar" type organizations (open higher education sector) but should have close relationships with them as it can help them innovate, bridge boundaries and increase creativity.

After a short introduction in which the structure of the paper is explained, the authors zoom in on the narratives that exist around open education and higher education. Open education is often seen as a replacement of traditional HEI, supported by the fact that open education can be seen as a disruptive innovation, has zero marginal costs characteristics and can contribute to the unbundling of higher education. To prevent that HEI will blindly adopt the replacement narrative, the authors take the reader with them on their own alternative narrative. They do this by explaining different business models components in relation to HEI. After this they elaborate on the metaphor of the cathedral and the bazaar in the higher education sector. This section requires some focused reading as it explains the core principle of the article. The authors tried to make it as concrete as possible by giving examples of such cathedral- and bazaar-type business models. As a conclusion of their overview of the conceptual framework, an analytical framework is proposed that could assist in the analysis and comparisons of whether HEI business models are more cathedral- or more bazaar-like. Most HEI fall somewhere along this continuum. This section requires some expertise of the readers to fully understand and conceive the implications of this proposed narrative. That being said, in the discussion section the authors provide a really practical and must-needed illustrative example of using this framework to compare different business models (a traditional university, Coursera and OERu). While performing such an analysis is not part of this conceptual paper, it would be really valuable to read about follow-up research on this topic.

All in all, the authors succeed in taking you as a reader on their journey in this conceptual paper in which they propose an alternative narrative to the question: 'will open education replace traditional higher education or augment it?' This paper is primarily aimed on researchers, decision-makers and policymakers in higher education and it provides them with a clearly structured and well written paper. The proposed metaphor including the analytical framework can be used to improve their understanding of the implications of digital innovation in higher education. Even though some sections might require some re-reading in order to truly grasp the meaning, it is a paper that could act as a starting point to discuss the future of HEI.

Understanding K-12 teachers' intention to adopt open educational resources

Tang, H., Lin, Y.-J. and Qian, Y. (2020). Understanding K-12 teachers' intention to adopt open educational resources: A mixed methods inquiry. *British Journal of Educational Technology*. doi:10.1111/bjet.12937

Reviewed by Marjon Baas (Leiden University / Saxion UAS, Netherlands)

In this paper, Tang and colleagues explored teachers' intentions to adopt OER in K-12 settings through a mixed method study. The Technology Acceptance Model (TAM) was used to quantitatively measure to what extent teachers' perceived ease of use, perceived usefulness, and attitudes towards OER predicted their intention to adopt OER. Additionally, to extend beyond the TAM determinants, qualitative questions were asked to examine teachers' perceptions of and experience with OER adoption. The results show that perceived ease of use and perceived usefulness predicted teacher intention to adopt OER. The practical implications deriving from their findings focus on how to encourage OER adoption by providing support in searching and evaluating OER as well as advocating OER within K-12 settings.

The context of this study is a K-12 setting which is really interesting since most studies undertaken on OER adoption take place in higher education contexts. The data collection itself took place in an online course. In this course, participants needed to engage in a series of Open Educational Practices. These activities did not only align with the goal of the course itself, but also ensured that teachers had experience with OEP before the quantitative data collection. By doing this, the authors tackled one of the main issues of OER adoption research, namely teachers being unfamiliar with (the defining characteristics of) OER. Additional qualitative data was collected in the final week of the online course in which participants needed to hand in their self-reflections on OER adoption. The methods section is robust, and the authors make use of existing instruments. The instruments and their statistics are provided in the supplementary information. One downside however, as noted by the authors themselves, is the limited sample size of 68 certified teachers. Even though the authors applied partial least squares regression modelling rather than covariance-based structural equation modeling, the study would perhaps have been more persuasive with a bigger sample size. Nevertheless, the authors made up for the smaller sample size by also collecting qualitative data, consisting of self-reflections teachers entered during the final week of the course. In the results section, the findings of the quantitative data are first presented quite statistically which makes it difficult to grasp the implications of this short section. However, in

the next section the authors focus on the qualitative data which makes the findings more tangible. Especially the quotes they have used to illustrate the strengths and weaknesses of both perceived ease of using OER and perceived usefulness of OER are insightful. A valuable understanding of these two factors supports their findings showing that it influenced teachers' attitude towards OER. The conclusion and discussion section is elaborate and provides a clear interpretation of the results, including practical recommendations for K-12 education to support OER adoption.

Overall, this study contributes to open education research by exploring OER adoption in a K-12 setting through mixed-methods. This is an important field of study, since OER adoption still remains a challenge for many K-12 educational institutes. Many different variables interplay in OER adoption and this study provided both theoretical and practical insights related to this topic. Since the article and supplementary files are made available through open access, the results can be reviewed by all who are interested, inside and outside K-12 settings.

Open Educational Practices

Open educational practices of MOOC designers: embodiment and epistemic location

Adam, T. (accepted). Open educational practices of MOOC designers: embodiment and epistemic location. *Distance Education*, 41(2).
<https://doi.org/10.1080/01587919.2020.1757405>

Reviewed by Robert Farrow (The Open University, UK)

The starting point for this study is the observation that Global South countries and institutions are systematically under-represented in the content of the major MOOC platforms. Even though it is a phenomenon widely acknowledged, there is little available research on the impact of Western dominance on the epistemologies of open education. Adam focuses on the “embodied, distributed and situated cognition” (Derry, 2008) which it is claimed is overlooked by traditional pedagogies that deemphasize the importance of language, tradition and cultural knowledge.

Adam’s approach is intersectional, and draws on thinkers from feminism, decolonisation and critical pedagogy. An explicit connection is made between critical reflection and the embodied nature of practice with the goal of drawing out a wider sense of the meaning and potential of openness through reflexivity.

The method used in this study is a series of phenomenological interviews with MOOC designers in South Africa (N=27). Participants were asked about their understanding(s) of openness and how this influences their work as designers. Thematic analysis identifies four categories of experience with concomitant understandings of openness: personal background (broadening the target audience; respecting cultural practices; overcoming stereotypes; acknowledging one’s positionality); academic background; life experiences (disability; privilege); and ideological and political influences. These themes provide a useful index of factors which can focus research on different aspects of embodiment.

The paper concludes with a call to recognise the plurality of knowledge and include marginalised voices in the discourse around open education. The key contribution made is the idea that openness should be understood as an identity and way of being (rather than an approach to learning content or educational practice) and that this should be foregrounded in any attempt to understand openness in education.

One of the central claims of the paper is that Western epistemologies are by their very nature based in a different set of categories than non-Western epistemologies. Therefore, it would have been very interesting to carry out “control” interviews with

Western MOOC designers to see whether there were differences in the emergent themes. This might have provided a stronger support for some of the claims made. Though these are hardly universally applied, many MOOC designers are becoming more attentive to embodied interactions as a result of innovations like remote proctoring, universal learning design and theories of embodied learning/cognition. This may indicate a point of convergence which could support decolonisation and reorientation in open education.

PRAXIS: Open Educational Practices and Open Science to face the challenges of critical Educational Action Research

Czerwonogora, A., & Rodés, V. (2019). PRAXIS: Open Educational Practices and Open Science to face the challenges of critical Educational Action Research. *Open Praxis*, 11(4), 381-396. doi:<http://dx.doi.org/10.5944/openpraxis.11.4.1024>

Reviewed by Hélène Pulker (The Open University, UK)

This paper presents the findings of an Educational Action Research (EAR) project which explored the potential and benefits of academic Professional Learning Communities (PLC) for the transformation of teaching practices with digital technologies using the Open Science (OS) and Open Educational Practices (OEP) frameworks, in the context of higher education in Uruguay.

The authors claim that this innovative approach of combining EAR and academic PLC with OS and OEP approaches have had a positive impact on the transformation of teaching and educational research practices, fostering reflective practices and OS and OEP adoption, even if this project, they stress, needs to be tested and validated in other contexts and communities.

The research uses a robust Social Network Analysis (SNA) method to analyse the written exchanges from the 30 participants in 127 reflective writing-blog posts including 248 peer comments during a three months teacher training course. The conclusions are supported by the data. However, it would have been interesting to collect more qualitative data, for example through focus groups, to evaluate the perceptions individual participants had of the EAR and how they believed this innovative combination of EAR, PCL and OEP helped them to reflect and change their own teaching practices with the technology.

Although the results are presented clearly, a summary of the key findings would have been helpful. It would also have been interesting to have a discussion section between the results and the conclusions. For example, in what ways did the EAR combined with OEP and OS fostered academic professional learning, and in what

ways did this model differ from reflective practices purely using the communities of practice framework.

The argument to support this innovative research project and the study itself are very well described but there is a lack of argumentation following the results to situate this research project within the wider field of teacher education and professional development in the context of having to adopt open educational practices. Otherwise, the article is well written and reads well, even if, for novices in SNA, the section on results is a little opaque.

The authors claim that such a study combining EAR, PLC with OS and OEP has never been done before, therefore there is no reference to similar studies. However, the frameworks used in the research are very well explained. Perhaps a more comprehensive comparison with the communities of practice framework would have been welcome.

This paper is of particular relevance for the countries and institutions which are on the path to transformation of teaching and educational research practices and may gain from adopting open educational practices and open science through participatory technologies. This paper is also useful as it provides an innovative model for professional development that many HE institutions could replicate and learn from.

Who opens online distance education, to whom, and for what?

Lee, Kyungmee (2020). Who opens online distance education, to whom, and for what?: A critical literature review on open educational practices. *Distance Education*. <https://eprints.lancs.ac.uk/id/eprint/143340/> ISSN 0158-7919 (In Press)

Reviewed by Hélène Pulker (The Open University, UK)

This paper is a critical literature review exploring the current status of OEP (defined in broad terms) in online HE settings through a systematic analysis of 29 scholarly narratives to establish who opens online distance education, to whom and for what purpose.

It is claimed that the main providers of open education are, on the one hand, individual actors with enthusiasm for openness in education and positive attitudes towards OEP, sometimes supported by technology-driven contributors, such as Apple; and on the other hand universities, divided into four groups: the traditional campus-based universities, the open and distance universities, the Western universities and the nonprofit organizations. The literature review also reveals that

universities open education to a large number of beneficiaries with unknown characteristics, and they are sometimes insiders or outsiders in relation to a particular HE institution revealing a blurry distinction between formal and informal learning. OEPs are suggested to be beneficial for populations from extreme sociocultural and political circumstances such as migrant domestic workers or people from developing countries. The paper suggests that, being under increasing pressure to widen participation in their institutions, traditional campus-based universities have participated in the OEP movement to make HE more accessible to the disadvantaged. The author claims that, despite a clear enthusiasm for OEP, there is a lack of clear understanding of the actual purpose for doing OEP across the 29 papers reviewed and notes that, generally, among the traditional campus-based universities OEP seems to be one of those many marginal tasks they need to do to respond to top-down institutional policies rather than to serve the interest of the disadvantaged.

The methods used are robust and appropriate. The search for relevant articles was conducted following a systematic scoping process using Scopus, the largest abstract and citation database. The search, based on titles, abstracts and keywords, returned 137 articles, of which 29 were selected on the basis that they discussed real-life OEP (literature review and conceptual articles were rejected), and that they were indexed in the Social Sciences Citation Index citation database. The narratives in the paper were analysed using a grounded theory approach (Charmaz, 2014) and the Corbin and Strauss (2015) three steps coding method. Although an unusual method for an analysis of papers, the grounded theory approach enabled conceptual categories to emerge from data, rather than initially driven by a theoretical framework.

The data presented as an answer to the question 'Who opens online distance education, to whom and for what?' support the conclusions drawn in the article. The argument is clearly articulated. The paper is written well and reads well.

The papers situates the research in the current debate on OEP, and adds to the increasing body of critical literature on OEP has begun to call for scholars to undertake empirical and contextualised research on OEP, for example Cronin (2017) and Havemann (2020). Perhaps, in the introduction, there should have been a mention of the Open University (UK) and its social mission to enable the disadvantaged to access HE.

This paper was published in the 2020 Special Issue on Critical Questions for OEP in the *Journal of Distance Education*. It is highly relevant for open education research as it calls for scholars and HE institutions to think about the purpose of doing OEP and it suggests that motives to participate in the OEP movement may be reconsidered as, up until now, it is claimed that the genuine pursuit of the original

social inclusion agenda of distance education among open educators has been lost (Lee, 2019).

Exploring Open Digital Badges in Teacher Education: a Case Study from India

Wolfenden, F., Adinolfi, L., & Cross, S. (2020). Exploring Open Digital Badges in Teacher Education: a Case Study from India. *Journal of Learning for Development*, 7(1), 108-115. <https://jl4d.org/index.php/ejl4d/article/view/383>

Reviewed by Beck Pitt (The Open University, UK)

This paper focuses on the work of the TESS-India project, which aimed to improve teacher pedagogy and practice through co-creation and at scale use of an openly licensed toolkit of resources and an accompanying MOOC. The paper presents the findings from a workshop with educators that explored the possibility of using open badges to recognise successful engagement and completion of localised TESS-India resources for teacher training.

Research on open badging to date has largely focused on the Global North. This paper therefore provides much needed insights into perceptions and applicability of open badging within a Global South context. The paper provides a detailed overview of the group discussions and activity during the workshop, presenting different ways in which participants engaged with learning design approaches to map assessment and accreditation onto their own courses. The approach detailed could be replicated within other contexts; a suggestion which is made by the authors at the end of the paper. Upon reviewing the workshop group discussions the authors identified 4 areas participants felt would motivate learning. These focus on recognition and sharing of achievements both personally and collectively with colleagues, the development of examples of good practice and recognition within the wider context of national frameworks and structures.

Insights into the role of such workshops on teacher educator practice is also highlighted and the authors note a number of shifts including that of more reflective practice or the consideration of diverse methods of assessment. The paper concludes with a variety of potential avenues for further research including the continued exploration of the potential of open badging for opening up conversations around innovative pedagogy and practice in both the Global North and South.

Open Pedagogy

Affordances, Challenges, and Impact of Open Pedagogy

Baran, E., & AlZoubi, D. (in press). Affordances, Challenges, and Impact of Open Pedagogy: Examining Students' Voices. *Distance Education*.
10.1080/01587919.2020.1757409

Reviewed by Caroline Kuhn (Bath Spa University, UK)

This paper attempts to understand how students conceptualise open pedagogy practices (OPP) and how they perceive the affordances, challenges, and impact. This understanding, the authors claim, is critical to developing working models for open pedagogy in practice in higher education contexts. In order to this the researchers addressed two research questions, one directly related with participant's perception of the affordances and challenges of open pedagogy (OP) and the other explores student's perception of the impact of OPP on their knowledge and awareness of open access and their agency.

The study was designed using a single holistic qualitative case study for which 13 students from three American HEIs were selected. Participants had no prior experience with open practices and were asked to produce three different renewable assignments as OERs: an open online course module in Canvas Commons, an open online book chapter in PressBook, and a wikibook. The aim of these activities was to collect students' insight about their experiences while engaged in the open pedagogy assignments.

The researchers collected the data using reflection reports and semi-structured interviews which were analysed through a thematic analysis. The findings highlighted the affordances and challenges of six main OPP: content curation, peer feedback, community engagement, development, reflection, and scaffolding. Each of these practices were explored in certain depth by the authors summarising the perception of the participants in regards with each practice. Using that information the authors created the "open pedagogy in action" model. Although the model takes into account the practices that were identified by the participants it is not clear to the reader how the empirical data was then transformed into a practical model, what is the theory that was used to arrive at the process of generalising the data into a heuristic tool. The authors assure that the model "provides instructors with practices to develop students' knowledge and awareness of open access and student agency in the classrooms" I believe that such useful findings would be of

better use if the authors would have given an overview of how this model is thought to operate in practice.

The authors suggest that further research is needed to address the strategies to promote students' critical engagement with OEP. It might be useful to explore the use of the model in practice to create some guidelines so that this can be added to such useful findings for the field of open educational practices. One excellent achievement of this paper is that it opens different lines of inquiry into the field, suggesting different possibilities that can be explored in open pedagogy, supporting new researchers to embark in any of these topics suggested by the authors.

Evolving Into the Open: A Framework for Collaborative Design of Renewable Assignments

Katz, Stacy and Van Allen, Jennifer (2020). *Evolving Into the Open: A Framework for Collaborative Design of Renewable Assignments*. CUNY Academic Works.
https://academicworks.cuny.edu/le_pubs/306

Reviewed by Michael Dabrowski (Athabasca University, Canada)

This paper is an attempt to formalize a collaborative renewable assignment design framework for use in pedagogical applications. The paper begins with a brief overview of the arguments against disposable assignments and in favour of renewable assignments as envisioned by Wiley and Hilton (2018). The authors build the framework on a class-based assignment one of them developed in the teacher training program. The course explores the flexibility afforded by OER licensing to remix, revise, adapt or create content.

This paper is not so much research, as it is a personal account and guidebook for the reader on the journey of transitioning from disposable to renewable assignments. The authors underscore that this is not intended as a rigid framework, but rather as a reflective practice to nudge faculty, librarians, and students towards the creation of meaningful open content. The process that the authors create is documented throughout with citations from well-known authorities on the OER creation process to lend weight to their process choices. More than anything else, this is an attempt to visually formalize open pedagogical practices so that others may use the framework when looking to transition from more traditional educational methods with emphasis on the need for collaboration between faculty and librarians to facilitate OER development.

To many OEP practitioners and those familiar with Wiley and Hilton's work, much of this text simply adds formal structure and more verbiage to the migration from disposable to renewable assignments. However, for anyone who is getting their feet wet and wanting a coach along the journey towards open practices, this provides a structured well documented point of departure into the increasingly popular field of open pedagogy. The ruminations between the two authors are presented to facilitate the reflective process so that readers can directly apply the framework to their immediate needs. This text also comes with links to key open pedagogy texts available online and appendices that include a rubric for evaluating student OEP work and links to sample output created by students shared with Creative Commons Licenses online.

Becoming an open educator: towards an open threshold framework

Tur, G., Havemann, L., Marsh, D., Keefer, J. M., & Nascimbeni, F. (2020). Becoming an open educator: towards an open threshold framework. *Research in Learning Technology*, 28. <https://doi.org/10.25304/rlt.v28.2338>

Reviewed by Helen DeWaard (Lakehead University, Canada)

The search for defining characteristics and qualities of an open educator has prompted Tur et al. (2020) to present this 'diamond in the rough', a cross-pollination of two disparate lines of inquiry brought together to answer the question "Who are open educators and what makes their practices different?" By connecting research on threshold concepts (Meyer & Land, 2006) with research to define an open educator (Nascimbeni & Burgos, 2016), the authors of this paper frame an argument for further empirical research into the "transformation, troublesomeness, and liminality associated with the formation of an open educator identity" (Tur et al., 2020, p. 11).

The authors suggest the conception of openness in education has shifted focus from the property of things (open educational resources as OER), toward the practices and processes of engaging with OER. The authors posit that research has yet to fully examine the identity and characteristics of those who orient toward OEP. This paper adds value to the body of research with a unique lens and theoretical framework that, when applied to OEP identity formation, will elicit new thinking and directions for research and practice. By considering identity building, as a component of OEP, through the lens of threshold concepts, the authors propose an inventive model that has some appeal. While threshold concepts (TC) theory

focuses on learning and cognition, this paper shifts to focus on the social and organizational “ways of thinking, practicing and being which act to signal membership of, or changing status within, a community of practice” (Tur et al., 2020, p. 5).

Three of the eight threshold concept criteria are selected to illuminate the “shadowy figure of an open educator” (Tur et al., 2020, p. 6). These include criteria relative to transformation, troublesomeness, and transitions or liminality. The authors briefly explain the relevance of the three TC criteria in relation to the identity of open educators. Additionally, it would be helpful for the authors to explicitly state their rationale for the selection of the three TC criteria and specify definitions as provided in TC research. Meyer & Land (2006) identify the criteria for troublesome knowledge as ritual, inert, conceptually difficult, alien, tacit, and includes difficult language. Knowing these identifiers of troublesome knowledge would support the authors’ argument that open educators need to redraw their conceptual maps and reject previously held beliefs about teaching and learning. As educators face troublesome moments to apply, reposition, or resist openness in their practice, this is less about the open education movement, as suggested by Tur et al. (2020), and more about the individual and accepted norms of practice.

There are potential commonalities in the TC conceptions presented in this paper to those found in literacy discourse. For example, the notion of identity as defined by Gee (2000) that is shared by the authors, links to a deeper study into identity as a process of being, doing, knowing, and becoming (Gee, 2017). Yet this minor omission only further enhances the potential expansion of ideas explored in this paper. As such, this paper will encourage others to investigate and present explicit examinations of the episteme, phronesis, and techne of open educational practices, as they relate to threshold concepts. Thus, this paper fulfills its purpose to further the discourse around ‘becoming’ an open educator.

Sprinting to the Finish Line: The Benefits and Challenges of Book Sprints in OER Faculty-Graduate Student Collaborations

Zapata, G. C. (2020). Sprinting to the Finish Line: The Benefits and Challenges of Book Sprints in OER Faculty-Graduate Student Collaborations. *The International Review of Research in Open and Distributed Learning*, 21(2), 1-17.

<https://doi.org/10.19173/irrodl.v21i2.4607>

Reviewed by Michael Dabrowski (Athabasca University, Canada)

This paper recounts the objectives, processes, and experiences of graduate students who participated in a book sprint format OER development of Spanish language resources. A brief overview of existing book sprint experiences where academic experts were brought in to create the OERs is followed by the author highlighting the gaps in these publications. The particular boom spring in question extends the existing research by using graduate students, and through the creation of some instruments to collect evidence about the efficacy of this OER creation process for the participants. The paper argues that the graduate student experience in the book sprint was both beneficial personally and professionally, something universally demonstrated in previous publications, while highlighting the challenges tying together the pedagogical objectives, the sprint experience, and the created open content.

The methodology for this research is appropriate given the limited size of the sample. With six graduate students, it would be difficult to use any other methodology than a case-study with mixed methods data analysis. While the author highlights the limitation of the study and ways in which it could have been made more robust, the book sprint case is well documented with sufficient detail to allow the reader to fully understand the process and underlying pedagogical and logistical foundations that guided the project. The research is timely, relevant and accessible, and despite the sprints focus on second language acquisition, the demonstrated pedagogical benefits for the participants invite the reader to extrapolate to their own disciplines and developmental levels.

Unsurprisingly, the participants all reported positive experiences working in collaboration with peers on a project complimenting their disciplinary interests. In fact, the researcher highlights this as the most impactful benefit due to the personal and professional growth opportunities that collaboration provided. The clear benefits of developing OERs to future teachers are highlighted through interpersonal knowledge transfer, shift in perspective from student of teaching to

teacher of students, and an increased confidence in their teaching abilities as demonstrated through OER development.

The author cites the lack of completion of the assigned OER chapters in the allotted time as a frustration factor for both team lead and participants and critiques the format of the book sprint and its inherent restrictions. Perhaps this highlights that book sprints should be a process and that OER creation is iterative in nature, in contrast to the traditional publishing model. The argument and conclusions are presented clearly and succinctly. However, the emphasis on personalization of OER sprints to participants for the maximization of pedagogical benefits seems to suggest that the ideal form of this methodology is unlikely to function in our increasingly financially constrained environment.

This paper extends open education research focused on professorial collaboration and shifts the practices to graduate students clearly demonstrating the capacity of these academics-in-training to contribute to OER creation in a meaningful way both to themselves and the global community.

Open Educational Resources

Toward a Critical Approach for OER: A Case Study in Removing the 'Big Five' from OER Creation

Joseph, K., Guy, J., & McNally, M. (2019). Toward a Critical Approach for OER: A Case Study in Removing the 'Big Five' from OER Creation. *Open Praxis*, 11(4), 355-367. doi:<http://dx.doi.org/10.5944/openpraxis.11.4.1020>

Reviewed by Kathy Essmiller (Oklahoma State University, USA)

This article describes the results of a single case study research project in which the authors explore advancement of a critical approach to open educational resources (OER) through elimination of the use of proprietary software in OER creation processes and products. Joseph, Guy and McNally state that although critical OER literature has drawn attention to power imbalances, more work is needed to understand how the use of proprietary software interacts in and with those imbalances. Using moral arguments advanced by Stallman (2002) and Waynar (2000), the authors employ a critical lens to analyse how their own OER creation experience would have been transformed without the use of software from Apple, Alphabet/Google, Amazon, Facebook and Microsoft, described in the article title as the 'Big Five'. They found that avoidance of the 'Big Five' did "little to advance a critical approach to OER" (Joseph et al., p. 356).

The study design was a single research case study, and cites literature supporting the design as appropriate for projects seeking deep understanding through the study of individual programs. The case studied was the authors' creation of a series of instructional modules for the University of Alberta's Opening Up Copyright. The article does not include an explicit description of data collection methods used, but the rich description of the context and processes suggest the data was gathered and analysed by the authors as they engaged in creation of the modules and reflected upon their practice. The authors' thorough description of challenges associated with creating the instructional resources without using the 'Big Five' makes clear to the reader why they conclude the cost outweighs the benefit.

In addition to the value the findings of this study have for future open education research regarding the use of proprietary software, scholars will benefit from the literature review, discussion of theoretical foundations, and justification for the use of case study research for similar projects. The literature review presents articles discussing the balance of usability and openness as informed by open source software conversations, sustainability of OER in terms of production support, and the need for increased scrutiny into "social and power relations" (Joseph et al.,

2019, p. 357) embedded in the creation, dissemination and use of OER. The authors provide a robust description of the theoretical foundations which informed the critical lens through which they designed and enacted their research. The article includes reference to a number of other single case studies exploring OER, and refers to several works supporting use of single case research studies for projects seeking understanding of processes and meaning.

The authors recommend continued use of critical perspectives for further exploration and study of OER. They recommend that, although “pragmatic arguments exist” for continued use of proprietary software (Joseph et al., p. 363) OER creators remain alert to how such use might exacerbate existing power imbalances.

Are MOOCs Open Educational Resources? A literature review on history, definitions and typologies of OER and MOOCs

Stracke, C., Downes, S., Conole, G., Burgos, D., & Nascimbeni, F. (2019). Are MOOCs Open Educational Resources? A literature review on history, definitions and typologies of OER and MOOCs. *Open Praxis*, 11(4), 331-341.
doi:<http://dx.doi.org/10.5944/openpraxis.11.4.1010>

Reviewed by Caroline Kuhn (Bath Spa University, UK)

The main aim of the article is to discuss if MOOCs (Massive Open Online Courses) should be considered as OERs. This debate is done examining the history and nature of both OER and MOOCs through analysing different OER definitions and typologies concerning their dimensions and categorisations. This debate leads to a discussion that is focused on their quality for which the authors used the OpenEdQuality Framework. To answer the question, the authors took two perspectives, an OER perspective, where MOOCs as a product can be called OER, and from an open education perspective and innovation, in which MOOCs are going beyond OER as enablers of Open Education and are understood as an innovative way of changing education.

To arrive at their conclusion, the authors analysed different definitions and typologies of OER. After that, they present definitions and usages concerning MOOC's dimensions and categorisation and related them to the standard definition of OER. However, they introduce an interesting third element, namely, the OpenEd Quality Framework, which they used as their theoretical underpinning. The framework is developed by an organisation called the MOOQ Alliance, and it is used as a tool for designers, facilitators and providers to support the benefit of the

learners. The quality of the resource, following this framework, relates to the objectives, realisations, and the outcomes of the resource. Although the framework was initially created for MOOCs, the authors considered it suitable to explore OERs, explaining in detail their considerations to do this.

The authors suggest that whether a MOOC is considered a type of OER will depend on the perspective taken, that is, either as a resource or as a learning innovation. If they are considered as a resource, MOOCs could be considered to be a category of OER, but it will depend on the intent of the educational intermediary. If it is taken as open learning innovation, MOOCs transcend the OER category and have the potential to enable innovative learning processes and experiences. What is more, and I consider, highly interesting, is that MOOCs can be seen as more than just resources and be transformed into learning opportunities and environments for self-regulated and collaborative learning.

This paper can be useful for designers and learning instructors that are thinking of using MOOCs in their learning experience. I also think that the introduction of the framework can be highly relevant for those who evaluate MOOCs or OER before they make their decision to integrate them in the learning experience. Having a concise history of both OER and MOOCs in one place is also helpful for those researchers interested in this.

Current state of open educational resources in the Arab region

Tlili, A., Jemni, M., Khribi, M.K. et al. (2020). Current state of open educational resources in the Arab region: an investigation in 22 countries. *Smart Learning Environments*, 7, 11. <https://doi.org/10.1186/s40561-020-00120-z>

Reviewed by Kathy Essmiller (Oklahoma State University, USA)

This article presents and discusses results gathered from a survey investigating the current state of Open Educational Resources (OER) in the Arab region. The research design included a survey adapted from existing questionnaires and validated by OER experts from the Arab League Educational, Cultural and Scientific Organization (ALECSO) and the Smart Learning Institute of Beijing Normal University (SLIBNU). The survey investigated perceptions of OER, use of OER, how OER had been empowered through “initiatives and policies” (Tlili et al., 2020, p. 3), and the accessibility of OER for Arab students. The authors found that OER progress in the Arab region is uneven, describing the region’s OER adoption and use as “still in its infancy” (Tlili et al., 2020, p. 12), and recommend increased use of OER in the Arab region to address social justice issues and improve student learning outcomes.

Conducted as a partnership between ALECSO and SLIBNU, the study aimed to “promote social justice and facilitate OER adoption in the Arab region” (Tlili et al., 2020, p. 3). ALESCO distributed the questionnaire to the Ministry of Education and Higher education of 22 Arab countries as well as to individuals listed in the ALESCO OER database as having expressed interest in the use and adoption of OER. Having received seven hundred thirty-five completed questionnaires from 21 countries, the authors were able to generalize their findings to the Arab region overall.

Questions investigating the perceptions of those in the Arab region regarding OER showed a high level of awareness regarding the role of OER in improving learning outcomes, but that perceived difficulties associated with the creation and use of OER act as a barrier to its use. Those difficulties included limited availability of Arabic content, lack of integration with structured educational practices, lack of time and resources necessary for the adaptation and creation of OER, and the need for improved awareness of open licensing. Participants perceived government support of OER use, but identified a lack of vision and the “absence of strategies or models” (Tlili et al., 2020, p. 9) as issues inhibiting sustainable OER development and use. Additionally, responses indicate that participants perceive that both awareness of appropriate content and ICT infrastructure pose challenges for the accessibility of OER in the Arab region.

This study is valuable for those seeking research-informed recommendations for how to strengthen OER progress in terms of OER perceptions, use, initiatives and policies, and accessibility to address social justice issues and improve learning outcomes. The authors provide a breakdown by percentage of answers to the survey questions, and present the data in easily interpreted graphical form. The paper provides insight into reasons informing the study itself, as well as information about organizations which support and advocate for the use of OER in Arab countries, effectively helping fill the existing gap in information about the use of OER in the Arab region.

Open Ecosystems

Learner skills in open virtual mobility

Rajagopal, K., Firssova, O., Op de Beeck, I., Van der Stappen, E., Stoyanov, S., Henderikx, P., & Buchem, I. (2020). Learner skills in open virtual mobility. *Research in Learning Technology*, 28. <https://doi.org/10.25304/rlt.v28.2254>

Reviewed by Martin Weller (The Open University, UK)

This article examines internationalisation in higher education through the lens of Virtual Mobility (VM) and Open Education (OE), which it combines into the term Open Virtual Mobility. The authors focus on internationalisation within Europe, as encouraged through programmes such as the Bologna process. Through Virtual Mobility 'learners enrolled as students in one higher educational institute (HEI) have the opportunity to follow a course at another higher educational institute in the online mode.' Open education, as realised through MOOCs and OER have facilitated collaboration and allowed European HEIs to position themselves as global providers. These two methods offer different approaches to internationalisation.

The study used 'group concept mapping' (Kane and Trochim 2007), which is described as 'a mixed-methods approach in which advanced statistical analyses are applied to qualitative data'. Twenty eight participants who represented projects and networks in the two fields undertook the sorting process required in the concept mapping.

From this analysis, ten clusters of Open Virtual Mobility competencies are determined, including 'Intercultural skills & attitudes', 'Autonomy-driven learning', and 'Open-mindedness'. These clusters can be situated in terms of relative closeness to each other, i.e. the degree to which they correlate.

The authors conclude that combining VM and OE highlights 'a number of generic learner skills and competences'. These competences combine aspects of the three key drivers in the current HE: digitalisation, collaboration and openness.

Open Virtual Mobility may be a useful method to frame OER and OEP within a global education context, particularly with increasing online collaboration between institutions arising from the online pivot resulting from the Covid-19 global pandemic. The Group Concept mapping method is potentially interesting to represent different elements that constitute a field such as OEP.

Open Education for a Better World: A Mentoring Programme Fostering Design and Reuse of OER for Sustainable Development Goals

Urbančič, T., Polajnar, A., & Jermol, M. (2019). Open Education for a Better World: A Mentoring Programme Fostering Design and Reuse of Open Educational Resources for Sustainable Development Goals. *Open Praxis*, 11(4), 409-426. doi:<http://dx.doi.org/10.5944/openpraxis.11.4.1026>

Reviewed by Beck Pitt (The Open University, UK)

How can open education contribute to furthering and enriching work done to progress United Nation (UN) Sustainable Development Goals (SDGs)? Critically, what potential barriers might exist to fully actualising the role of open education within this context?

This paper presents the Open Education for a Better World (OE4BW) programme, its establishment and iterative development through two cycles of mentoring during 2018 and 2019. The programme itself focuses particularly on the identified need to support the implementation and development of OER through a mentoring programme, within the context of SDGs (especially SDG4 Education).

The paper begins by positioning and contextualising OER within a variety of the challenges faced by learners and teachers, and which SDG4 aims to address. The authors provide a good overview of OER and the fundamental arguments as to why OER could provide possible solution(s) to many of the issues highlighted by SDG4, such as access to resources. However whilst open education has the potential to advance and address issues raised by SDG4, what are the potential barriers that could impede the effectiveness of open approaches?

Surveying national governments and a range of educational institutions around the world on their perceptions and experiences of OER revealed that in many parts of the world their use and development remains siloed and that capacity building is often overlooked. These insights confirm other research in this area and result in the application of Redecker and Punie's (2017) reference framework to develop the OE4BW initiative's mentorship scheme.

A detailed description of the OE4BW model and the programme's iterative improvement through surveying and detailed feedback from mentors and mentees following two cycles of implementation follows. Although participants from both iterations had overall positive experiences of their involvement in the scheme,

improvements were made to ensure OE4BW's long-term sustainability. Following the first iteration improvements included maintaining the scheme's diversity of participants and ensuring this was reflected in assigned partnerships and project management of work, particularly given the voluntary nature of the programme. These changes to the scheme yielded good results. Moreover participant commitment to the programme was evident in the continued involvement of those who had been part of the first iteration with developers/mentees involving themselves in other capacities or mentors reapplying to be part of the programme again.

Although focused on the OE4BW initiative, the experiences and recommendations outlined in this paper are of wider interest particularly in relation to developing similar unfunded voluntary mentor schemes and illustrating good practice for supporting others in a diversity of contexts. Possible replication of the scheme to directly target and progress other SDGs is also possible. As noted by the authors the longer-term impact of the scheme on participants and the implementation of OER is to be explored and this will be a critical piece in understanding the longevity and sustainability of the model used.

How to facilitate self-regulated learning? A case study on open educational resources.

Wong, T., Xie, H., Zou, D. et al. (2020). How to facilitate self-regulated learning? A case study on open educational resources. *Journal of Computers in Education* 7, 51–77. <https://doi.org/10.1007/s40692-019-00138-4>

Reviewed by Robert Farrow (The Open University, UK)

This study uses open educational resources (OER) as a focus for investigating self-regulation by learners. This is a timely and pertinent interest. As the authors note, there is an ever growing multitude of OER available to support the learning process. As informal learning takes place beyond the reach of most research, more work is needed to understand how OER are used outside institutions.

This research considers three aspects of self-regulated learning: learning motivation, planning and management, and self-monitoring. Three surveys (N = 149, N = 168, N = 150) were used to investigate these and focus groups carried out afterwards.

The focus of the experiment was the *i-Classroom* project, a “mobile classroom” initiative in Hong Kong which provided elementary school learners with a range of

OER (primarily video content) and support from faculty in the form of assessments, discussions and consultations.

Arguably this level of support is rather higher than most informal learning, and is more like a “Flipped Classroom” model (Brame, 2013; Mazur, 2009; Uzunboylu & Karagozlu, 2015). That said, finding ways to support self-regulated learning is nonetheless important.

The surveys were mostly based on 5-point Likert scales. The results were interesting. Higher graded students tended to have lower learning motivation (although this tended to improve over time). Students with lower grades tended to lose motivation when confronted with difficulties or obstacles. With respect to planning and implementation, students who felt they had better academic performance had better management of their learning but some students who felt they had less satisfactory academic performance rated themselves higher for planning competency. Most students felt competent in self-assessment, though this confidence fell with lower grades. A lot of detail on these statistical results is provided in the paper. The follow-up interviews indicate some strategies used in self-regulation, but, as might be expected in learners of this age, they are quite brief.

Connectivism (Siemens, 2005) is used as a theoretical framework for understanding the results in the context of an open online learning environment. Those interested in strategies for using OER might not find them in this paper, which is much more focused on self-regulated learning and how technology use can support this. In fact, openness of the resources seems to be largely incidental.

Motivation is identified as a key aspect of self-regulated learning, and the authors hypothesize that the pressure applied - even to young learners - by the Hong Kong schooling system may in fact inhibit learning through increased anxiety and procrastination. Crucially, those who have the confidence to approach others for advice and support may have an advantage in two ways: directly, through the support offered; and through the development of metacognition about the learning process.

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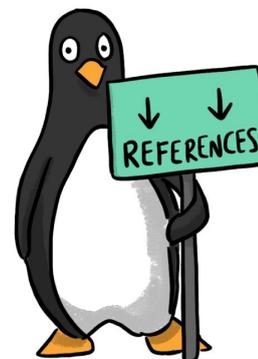
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