

# Evaluation of the UNESCO Recommendation concerning Open Educational Resources

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Open Educational Resources (OER) “are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others.”

In November, 2019, UNESCO adopted a resolution on OER that had five objectives:

1. Building capacity of stakeholders to create access, use, adapt and redistribute OER;
2. Developing supportive policy;
3. Encouraging inclusive and equitable quality OER;
4. Nurturing the creation of sustainability models for OER; and
5. Facilitating international cooperation.

Overall this policy represents well the state of the art in open educational resources (OER) and would serve to further the aims and objectives of open online education. Having said that, the document suffers from numerous cases of ambiguous terminology, some of it in places where serious misunderstandings could arise. The purpose of this article is to review this resolution, highlighting areas of ambiguity or where further discussion is needed in the IER community.

The document also suffers in places from a lack of clarity about the role of OER, equivocating between a perspective where OER are materials used exclusively in formal education, such as schools and institutions, and a perspective where OERs are used more widely to support informal and non-formal learning. I have noted instances where this occurs and argue in general for the latter, wider, perspective.

Related to this is the discussion of quality that occurs throughout the document. While nobody is arguing against quality, much of the language at least implies that a regulatory framework ought to be put in place, one that might be appropriate, if it is appropriate at all, for resources being developed for lower level schools and classrooms.

There are numerous cases where such a framework would be inappropriate, especially with respect to community-based OER development, and for OER intended for informal, adult and corporate learning. There is also a danger that such a framework would inhibit, rather than

enhance, OER development. Rather than recommending a supportive, rather than regulatory framework, with respect to quality.

This also relates to the question of who creates OER. While the document quite rightly points to the need to support disadvantaged communities, it often offers the perspective of requiring the provision of service to those communities, rather than that of supporting and empowering such communities. This raises the wider issue of digital colonialism, and the need for communities and cultures to have a voice and ownership over their own learning resources and development.

## What Are OER?

### Content, Tools and Infrastructure

The UNESCO definition includes “are learning, teaching and research materials in any format and medium.” Usually these are taken to be instructional materials, for example, textbooks, exercises, and class notes. The UNESCO definition reads more widely, however, explicitly including tools, platforms, metadata, standards, libraries and other repositories, search engines, preservation systems, and frontier technologies. [III.i.11.d]

### Limitations of Copyright

The definition describes two ways content, tools and infrastructure can be ‘open’: they reside in the public domain or have been released under an open license. The presumption under most legislation is that all resources not in the public domain are copyrighted, trademarked, or otherwise protected. The UNESCO declaration suggests that governments raise awareness “concerning exceptions and limitations for the use of copyrighted works for educational and research purposes.” [III.i.11.c]

This recommendation recognizes the mixes and complex nature of rights governing educational materials. It is unlikely that educators will be able to rely on OER exclusively, nor may it be desirable to do so, for a variety of reasons. However, it should be taken that the gist of the UNESCO recommendation the use of non-open copyright works should be the exception, rather than the rule.

It would have been helpful at this point for UNESCO to make clear what is implicit in this recommendation, and that is the fact that copyright is not an absolute. It is a right *granted* by governments, and is subject to limitations, such as those concerning fair use and expiry into the public domain. And it is important that governments and institutions understand that they do not need to comply with every and all request or stipulation made by commercial publishers, and

that terms of service may be subject to being overturned by relevant law, as just recently occurred with LinkedIn's terms of service.<sup>1</sup>

## No-Cost

The UNESCO definition is somewhat unique in that it required “no-cost” access. Various less stringent definitions have been attempted over the years in efforts to allow the commercial sale of OERs, for example, by stipulating that it “does not limit use or form” or “does not include NonCommercial limitations”. Examples of these other definitions are available on the Creative Commons Wiki.<sup>2</sup>

It is arguable that the “no-cost” provision is important and an essential component of the definition of OER. Creating a cost for access to OER creates a barrier to access, and limits access to some people. However, there are numerous declarations and statements asserting that the purpose of OER is access *for all*<sup>3</sup>, and that access for all is the primary and original motivating factor in the creation of OER.

## Open Licenses

OER distributed under open licenses are, according to the definition, resources “that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others.” These conditions represent a variation of the ‘five freedoms’ of open resources generally, and have been reiterated in numerous statements and declarations recognized by the UNESCO recommendation, for example, the 2007 Cape Town Open Education Declaration and the 2012 Paris OER Declaration.

The application of open licenses “introduces significant opportunities for more cost-effective creation, access, re-use, re-purpose, adaptation, redistribution, curation, and quality assurance of those materials.” These attributes serve broad educational needs, “including, but not limited to translation, adaptation to different learning and cultural contexts, development of gender-sensitive materials, and the creation of alternative and accessible formats of materials for learners with special educational needs.” [II.6]

Historically, a great deal of emphasis has been placed on the definition and interpretation of open licenses. For example, proponents have argued that content of different types cannot be mixed. But most of these limitations only hold if the user is a commercial entity making a specifically commercial use of the resource. This limitation does not impact more educational

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<sup>1</sup> Emma Woollacott. LinkedIn Data Scraping Ruled Legal. *Forbes*. Sep 10, 2019. <https://www.forbes.com/sites/emmawoollacott/2019/09/10/linkedin-data-scraping-ruled-legal/#4312d5a91b54>

<sup>2</sup> Creative Commons. What is OER? [https://wiki.creativecommons.org/wiki/What\\_is\\_OER%3F](https://wiki.creativecommons.org/wiki/What_is_OER%3F)

<sup>3</sup> Downes, S. The Real Goal of Open Educational Resources. <https://www.downes.ca/cgi-bin/page.cgi?post=67445>

users, whose focus remains on content and pedagogy. We should resist the idea that a person must become expert in copyright in order to use and benefit from OER.

Indeed, the introduction of the idea of copyright and licensing to the idea of sharing educational resources is arguably an unwelcome distraction from the main purpose. It leads to the feeling that the free and open use of learning resources is the *exception*, rather than the rule, and that *special permissions* are required in order to do it. But it is preferable to assert and make clear that copyright itself is the special permission you need to have in order to benefit commercially from the distribution of a resource. This should be especially the case in the domain of education, where in many nations education is seen as a public good, provided non-commercially by governments, with fees (especially at the lower levels) the exception rather than the rule.

## Education Licenses

The UNESCO document recommends “exploring the development of an international framework for copyright exceptions and limitations for education and research purposes.” [III.iv.15.e] This is a recommendation that resurfaces on a regular basis<sup>4</sup>, but one which should be resisted where possible. The issue arising with such a provision concerns the definition of ‘education’ (and in wider contexts, ‘research’). In particular, ‘education’ is typically thought to be only the activities conducted by and in the context of educational institutions such as schools.

However, a significant proportion of the benefit (arguably, *most* of the benefit) of OER and of access to learning resources generally occurs in the context of *informal and non-formal* learning<sup>5</sup>. But ‘exceptions and limitations for educational purposes’ do not typically apply to these contexts, and so (for example) people learning on their own, or learning in the workplace, are not able to take advantage of these exceptions and limitations.

Further, limiting these exceptions and limitations to educational and research purposes privileges educational and research institutions, and enables people who attend them (usually paying tuition or other costs) to enjoy privileged access to learning resources. It also creates a need for and demand for commercial resources that may persist after leaving the institution,

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<sup>4</sup> For example: Teresa Nobre, *Educational Licences in Europe*, Communia, 2018. [https://www.communia-association.org/wp-content/uploads/2018/03/Educational\\_Licences\\_in\\_Europe\\_Final\\_Report.pdf](https://www.communia-association.org/wp-content/uploads/2018/03/Educational_Licences_in_Europe_Final_Report.pdf)

<sup>5</sup> Martin Weller, Beatriz de los Arcos, Rob Farrow, Rebecca Pitt and Patrick McAndrew. Identifying Categories of Open Educational Resource Users. In *Open Education*, Patrick Blessinger and TJ Bliss, eds., pp. 73-91. <https://books.openedition.org/obp/3545?lang=en>

creating an ongoing demand for these commercial resources.<sup>6</sup> It may be the case that these results are desirable; that is a policy question. But these results are arguably inconsistent with the aims and objectives of a policy supporting OER.

## The role of OER

### Sustainable Development Goal 4

Much of the role of OER is for UNESCO viewed in the light of Sustainable Development Goal 4 (SDG4), adopted as part of the 2030 Agenda for Sustainable Development at the United Nations Sustainable Development Summit in 2015.<sup>7</sup> The goal of SDG4 is to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” OER are not specifically mentioned in SDG4 but are seen as a means of promoting these objectives.

The UNESCO recommendation states explicitly that a key prerequisite to achieve SDG4 is “sustained investment and educational actions by governments and other key education stakeholders, as appropriate, in the creation, curation, regular updating, ensuring inclusive and equitable access, and effective use of high quality educational and research materials and programmes of study.” [II.5] It follows that one reason these actions are undertaken, then, is to achieve the objectives of SDG4.

It’s an open and empirical question of whether any or all of these actions are in fact required to meet SDG 4. The phrase “effective use of high quality educational and research materials and programmes of study” is limiting rather than enabling. What constitutes “high quality”? Would lower quality resources (such as, say, the early Khan Academy videos, or student-produced resources) be sufficient? Similarly, what constitutes “effective use”? Arguably, *any* use might serve to satisfy SDG 4. We will consider the question of quality more fully below.

### Innovative Pedagogies

In addition to the role of OER in supporting SDG4, the UNESCO recommendation also includes an ambitious and forward-looking objective, suggesting that “the judicious application of OER, in combination with appropriate pedagogical methodologies, well-designed learning objects and the diversity of learning activities, can provide a broader range of innovative pedagogical options to engage both educators and learners to become more active participants in educational processes and creators of content as members of diverse and inclusive Knowledge Societies.” [II.7]

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<sup>6</sup> Eg. this note from Maha Nadarasa on the SolidWorks website.

<https://forum.solidworks.com/thread/230942>

<sup>7</sup> <https://sustainabledevelopment.un.org/post2015/transformingourworld>

This statement revisits the idea of the Knowledge Society, that is, a society that can “can successfully cope with this tension by setting up institutions and organizations that enable people and information to develop without limits, and that open opportunities for all kinds of knowledge to be mass-produced and mass-utilized throughout the society as a whole,”<sup>8</sup> an idea frequently revisited by the UN over the years. And it speaks to the idea that, by participating in the creation and use of OERs, students and educators become able to participate as members of the Knowledge Society.

The question is, what is needed *in addition* to OER in order to achieve desired educational outcomes (whatever those may be). Is it *all and only* “appropriate pedagogical methodologies, well-designed learning objects and the diversity of learning activities”? The terms “appropriate” and “well-designed” are significantly ambiguous. Additionally, the term “learning object” is a technical term and has a precise meaning in this context.<sup>9</sup> Additionally, the use of the term “application” suggests OER as a ‘treatment’ as understood in the context of literature describing instructivist pedagogies.

It would be preferable to think of this section as saying simply that “OER can help provide a broader range of innovative pedagogical options...” while reading the antecedent as suggestions for application rather than a specific prescription. This makes it clear that OER do not enable this in and of themselves, but leaves open a wider range of options as to how this potential may be realized.

## Open Pedagogy

Increasingly over the last few years the use of OER has been associated with ‘open pedagogy’, that is, a style of pedagogy that supports participatory technologies, encourages spontaneous innovation and creativity, and promotes the free sharing of ideas and resources to disseminate knowledge. As Hegarty writes, “Immersion in using and creating OER requires a significant change in practice and the development of specific attributes, such as openness, connectedness, trust, and innovation.”<sup>10</sup>

The UNESCO recommendation includes an endorsement of many of the practices of open pedagogy, including “equitable and inclusive access to OER and their use, adaptation and redistribution.” The use of OER “can help meet the needs of individual learners and effectively

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<sup>8</sup> Understanding Knowledge Societies. United Nations. 2005.

<https://publicadministration.un.org/publications/content/PDFs/E-Library%20Archives/2005%20Understanding%20Knowledge%20Societies.pdf>

<sup>9</sup> [http://edutechwiki.unige.ch/en/Learning\\_object](http://edutechwiki.unige.ch/en/Learning_object)

<sup>10</sup> Bronwyn Hegarty. (2015). Attributes of Open Pedagogy: A Model for Using Open Educational Resources. *Educational Technology*, July–August 2015.

[https://upload.wikimedia.org/wikipedia/commons/c/ca/Ed\\_Tech\\_Hegarty\\_2015\\_article\\_attributes\\_of\\_open\\_pedagogy.pdf](https://upload.wikimedia.org/wikipedia/commons/c/ca/Ed_Tech_Hegarty_2015_article_attributes_of_open_pedagogy.pdf)

promote gender equality and incentivize innovative pedagogical, didactical and methodological approaches.” [1.3]

There is, however, a tension between the expression in the UNESCO declaration and in the practice of open pedagogy. It is important to note that recognize here, and something that is embodied in open pedagogy and elsewhere, that OER enable greater *agency* on the part of the learner. The section 3 just quoted can be viewed as representing learners as passive and as individuals who are being helped, provided, supported or incentivized. OER as envisioned in open pedagogy enable individuals to define their own learning path and outcomes, as they are able to access and adapt materials based on their own needs.

## Who Creates OER

### Stakeholders

A stakeholder is a person who holds an interest in the objectives and outcomes of a program. The definition and assessment of program, including those that address OER, is based on the needs and opinions of stakeholders. Therefore, a definition of OER policy requires a description of the stakeholders.

The UNESCO recommendation provides that description:

Stakeholders in the formal, non-formal and informal sectors (where appropriate) in this Recommendation include: teachers, educators, learners, governmental bodies, parents, educational providers and institutions, education support personnel, teacher trainers, educational policy makers, cultural institutions (such as libraries, archives and museums) and their users, ICT infrastructure providers, researchers, research institutions, civil society organizations (including professional and student associations), publishers, the public and private sectors, intergovernmental organizations, copyright holders and authors, media and broadcasting groups and funding bodies. [1.4]

This is a very broad listing of stakeholders, and it is recognized by most that the interests of these stakeholders do not always align. The UNESCO recommendations also provide a secondary list of stakeholders:

Member States are encouraged to support the creation, access, re-use, re-purpose, adaptation and redistribution of inclusive and equitable quality OER for all stakeholders. These would include those learners in formal and non-formal education contexts irrespective of, inter alia, age, gender, physical ability, socio-economic status, as well as those in vulnerable situations, indigenous peoples, those in remote rural areas (including nomadic populations), people residing in areas affected by conflicts and natural disasters, ethnic minorities, migrants, refugees, and displaced persons. In all instances, gender equality should be ensured, and particular attention paid to equity and inclusion

for learners who are especially disadvantaged due to multiple and intersecting forms of discrimination. [III.iii.13]

While the first list is composed of institutional stakeholders, and in particular, those concerned with the production and deployment of OER, the second list is composed of groups of learners, taking care to explicitly name traditionally disadvantaged and overlooked groups.

A major stakeholder generally omitted in the document may be broadly classified under the heading of 'employers'. This especially applies to employers in SMEs who do not have access to learning resources, but who have no less a need to provide training and development to employees, and who have an interest in the broader outcomes of education policy, even if they are not directly involved in the production, deployment or use of educational resources.

## The Consumer-Producer Model

The division of stakeholder groups into three broad categories, as described in the previous section, requires a consideration of the model of OER development, deployment and use that is generally assumed in the UNESCO recommendation:

- First, a category of OER *producers* such as publishers, copyright holders and authors, media and broadcasting groups
- Next, a category of institutions that *deploy* OER, and as such, are responsible for *quality control* over these resources
- And third, a category of resource *consumers*, which would include all students, and especially the traditionally disadvantaged and overlooked groups

One of the thrusts of open pedagogy, and a fact widely understood in the educational community to be important, that the people listed here as *consumers* have a voice in the development of and use of OER, and not merely access to those created and produced by others. In other words, despite how the recommendations sometimes appear, there should not be a sharp distinction drawn between producers and consumers and those in between.

This is sometimes recognized by the UNESCO declaration. It encourages "building awareness among relevant stakeholder communities on how OER can... empower educators and learners to become co-creators of knowledge." [III.i.11.a] This is contrary not only to a consumer-producer model but also to instructivist models where pedagogies and resources are thought of as 'treatments' or 'applications' rather than co-creations.

This is especially the case with respect to the traditionally disadvantaged and overlooked groups listed above. While the document quite rightly points to the need to support disadvantaged communities, it often offers the perspective of requiring the provision of service to those communities, rather than that of supporting and empowering such communities.



Numerous voices have expressed the concern that OER, and similar initiatives, are just another example of the privileged nations imposing their values on others.<sup>11</sup>

It is important to view the recommendations in such a way as to ensure that OER support and promote not only the education of, but the identity and *voice* of those from vulnerable groups and persons with disabilities.

## How Benefits Are Created

The UNESCO recommendations point of this section is to point out the benefits of “regional and global collaboration and advocacy in the creation, access, re-use, re-purpose, adaptation, redistribution and evaluation of OER.” [II.8, III.v.15.a] This allows governments to evaluate resources for quality and to optimise their own investments. The benefit is that they can “meet their defined national educational policy priorities more cost-effectively and sustainably.”

This depiction presumes the consumer-producer model sketched above, depicting students as passive recipients. However, as noted above, OER serve: the interests of learners, education providers, national government, and more. While this section clearly identifies national governments it remains true that the actual benefits of cooperation are realized by all stakeholders, and that this actually makes a stronger case for cooperation.

Similarly, notwithstanding the need for governments to make their own assessments and meet national priorities, a better reading of the recommendations would allow for the possibility that all stakeholders participate in the evaluation of resources. Additionally, collaboration should allow for more dimensions of assessment than ‘quality’ and to allow for multiple types of assessment of the same resource, from varying perspectives.

There is also ambiguity in the type of benefit produced. There is a lot of debate in the OER community around the following point: “in ways that will enable them to meet their defined national educational policy priorities more cost-effectively and sustainably.” The argument here is that the benefit produced by OER is not merely efficiency or cost-effectiveness, but rather, improved educational outcomes, broader participation, support for marginalized populations, and promotion of equality.<sup>12</sup>

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<sup>11</sup> Eg. Sarah Crissinger. (2015). A Critical Take on OER Practices: Interrogating Commercialization, Colonialism, and Content. *In the Library With the Lead Pipe*. October 21, 2015. <http://www.inthelibrarywiththeleadpipe.org/2015/a-critical-take-on-oer-practices-interrogating-commercialization-colonialism-and-content/>

<sup>12</sup> For example: David Wiley. (2017). If We Talked About the Internet Like We Talk About OER: The Cost Trap and Inclusive Access. *Iterating toward openness* (weblog). November 8, 2017. <https://opencontent.org/blog/archives/5219>

## Teacher Education

Teachers are at once both creators of educational resources as well as directly implicated in their deployment. The key role they play makes them a natural focus of the UNESCO recommendations, especially with respect to their own education and development.

UNESCO specifically recommends teacher education “on how to create, access, make available, re-use, adapt, and redistribute OER as an integral part of training programmes at all levels of education.” [III.i.11.b] It also recommends “improving capacity of public authorities, policy makers, quality development and assurance professionals.”

Because of the need for wider education in open resources and related subjects, teachers should not only learn these things, they should also be able to teach these things, because not only teachers are implicated in the production and use of OER. The educator’s role should be *supportive* here. That if, if teachers are to be trained in the use of OER (as they should) then they should be trained in how to *support the use* of OER by other people.

We might think of the use of OER as a kind of literacy. We want all people to be literate in OER. And to be literate means being able to access, use, create and employ OER for a wide range of learning objectives. So while we want our teachers to be literate, we also want them to be able help learners be literate as well.

## Research on OER

An important part of the creation, deployment and use of OER is the research supporting and reporting on these activities. The UNESCO document recommends members supplement OER initiatives by “encouraging and supporting research on OER, through relevant research programmes on OER development, sharing and evaluating, including the support of digital technologies (such as AI).” [III.ii.12.g] This should be more precisely understood as meaning that the ‘support’ of digital technologies would be with respect to their use in the development and use of OER, and not just generic support for digital technologies.

There is a danger here of repeating work that has already been done, and also of conducting research on OER prior to implementing OER. At this point (17 years after the 2002 UNESCO declaration on OER) the research to be done ought to be research on actual implementations of OER, and not merely on (say) how to develop, share and evaluate OER, much of which already exists.<sup>13</sup> So it would be better to focus on research programs that assess the development, evaluation and sharing of OER.

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<sup>13</sup> Eg. at the OER Knowledge Cloud <https://www.oerknowledgecloud.org/> and the OER World Map <https://oerworldmap.org/>

It is also prudent, as OER are created, deployed and used, to evaluate their impact with respect to the role they are expected to play and the benefit they are expected to produce. This should include research not only on the direct application of OER, but also the policies and infrastructure that surround them, “deploying appropriate research mechanisms to measure the effectiveness and efficiency of OER policies and incentives against defined objectives.”

[III,v.16.a]

At the same time, there is a vagueness to the UNESCO recommendations. The document recommends “developing strategies to monitor the educational effectiveness and long-term financial efficiency of OER” [III.iv.16.c], however, the definitions of ‘educational effectiveness’ and ‘long-term financial efficiency’ would be difficult to obtain. It may be more prudent simply to monitor the long-term social and economic impacts, if any, of OER. The outcomes of such research would determine how it can be best applied.

## Quality of OER

### Quality Assurance

The UNESCO recommendation frequently references the quality of OER and suggests explicitly that governments should “develop and integrate quality assurance mechanism for OER into the existing quality assurance strategies for teaching and learning materials.” [III.ii.12.b] They advocate “developing and adapting existing evidence-based standards, benchmarks and related criteria for the quality assurance of OER, as appropriate, which emphasize reviewing educational resources (both openly licensed and not openly licensed) under regular quality assurance mechanisms.” [III.iii.13.f]

Nobody would argue against quality in educational resources. Resources used in the educational system, and especially the primary educational system, are reviewed and assessed for suitability. In this context, ‘quality’ means ‘appropriateness for use in schools’. This is true both for resources used in public (ie., government) schools, as well as private schools and home-schooling. However I think there’s a concern here and the potential for greater policy implications.

The use of OER therefore raises two questions: first, how do we ensure OER meet the same criteria for use in schools, and second, should these criteria apply more broadly to encompass OER *not* intended for use in schools? As we discuss elsewhere in this document, proponents often assume the stance that OER means *only* resources used by teachers in educational settings, and so we have proposals that address the quality of OER, to ensure inappropriate resources are not used in schools.

In a world with millions of OER, it would not be feasible to assess all possible resources that could be used in a school. So the ‘quality assurance’ recommendation creates a built-in limitation on the quantity of OER that can be produced, and by implication, a limitation on who

can produce OER. Is this desirable? Are “regular quality-assurance mechanisms” the appropriate response here? It is arguable that they are not.

The question becomes even larger when we consider the larger application of OER *outside* the domain of formal educational curricula. Many people – millions! – produce OER. Arguably, it would not be acceptable to require that all these people satisfy an OER quality framework before they are allowed to distribute their OER. At the very best, any quality enforcement mechanism would have to be *a posteriori* – that is, it would apply only after the resource is distributed, and apply as a corrective. Even so, the expense required could be considerable.

## What is Quality?

There is a significant question: *what counts as quality?* There have been some suggestions for quality frameworks (for example, TIPS<sup>14</sup> and CARE<sup>15</sup> and ECEC<sup>16</sup>). These have their differences, but in all cases, what counts as quality depends on purpose, and in the world of educational resources, there is no single purpose, but multiple purposes, as evidenced by the list of stakeholders above.

There are also different methods for the evaluation of quality for OER. Some have suggested peer review, as practiced by MERLOT<sup>17</sup>. Some recommend a quality certification process, perhaps along the lines of ISO<sup>18</sup>. Arguably a definition of quality based on student *outcomes* could be proposed, such that quality OERs lead to improved learning performance. Alternatively, quality could be measured in a utilitarian fashion, by whether a resource is actually used, or as determined by a recommendation system.

It is arguable that the issue of quality in OER is a straw man. It can deflect (and be used to deflect) from the objective of OER, which is to provide access to learning resources. While nobody can reasonably argue *against* quality, the case *for* quality is notoriously slippery and difficult to make, especially with regards to pedagogy, outcomes, and minimum acceptable standards.

The danger here is that the wording of the recommendation in relation to quality supports a view where *only* materials *known* to be high quality and effective (however defined) are considered in this context to support learning, to support open pedagogy, to support SDG4, and to support the other purposes of OER, and that these assurances can be made only by large enterprises, and that this condition would therefore work against grassroots and learner-led OER initiatives.

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<sup>14</sup> <http://oasis.col.org/handle/11599/562>

<sup>15</sup> <https://careframework.org/>

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<https://nesetweb.eu/en/resources/library/the-current-state-of-national-ecec-quality-frameworks-or-equivalent-strategic-policy-documents-governing-ecec-quality-in-eu-member-states/>

<sup>17</sup> <https://www.merlot.org/merlot/>

<sup>18</sup> <https://www.iso.org/iso-9001-quality-management.html>

Of course we prefer quality, but its use in the UNESCO document also suggests that there is a class of OER that is designated 'non-quality'. What should be the consequences of this? Should designated non-quality resources be omitted from this recommendation? Should they be ineligible for funding? Should they be prohibited from use in schools? These questions remain unanswered in the UNESCO document.

## Supporting Quality

It should also be noted that although the UNESCO document addresses OER in “the formal, non-formal and informal sectors” [I.4] there is in general a tendency to treat OER from the context of traditional (formal) education. We see this reflected in assessment of quality and outcomes of OER, for example, evaluation of the value of OER according to whether it is reused by teachers (as opposed to accessed and used independently by learners). This tendency should be resisted. It is arguable the most significant impact of OER will be (and is being) felt outside traditional and formal education.

That is why it is important that the assessment and evaluation of quality not become a burden that prohibits some entities (especially small and non-commercial entities) from creating and distributing OER. In order to support the objectives of OER - that is, to increase access to learning resources and to reduce educational expenses - *especially* in non-formal and informal learning, then measures taken to support quality should be well-considered.

There are good lessons to be drawn from the implementation of the Americans With Disabilities Act<sup>19</sup> (ADA) in the United States. The ADA is a well-intentioned and much needed piece of legislation and was important in ensuring that people with disabilities are able to properly access resources and facilities. An undesirable side-effect, however, was that in some cases ADA complaints prompted resources to be withdrawn entirely. For example, the University of California, Berkeley, “announced that it may eliminate free online content rather than comply with a U.S. Justice Department order that it make the content accessible to those with disabilities.”<sup>20</sup>

What could be more important than evaluation and assessment for quality is the provision of mechanisms that are more likely to promote quality outcomes. So instead of becoming a barrier, quality becomes something an OER policy can help people achieve. For example, rather than develop a policy requiring that (say) all videos have closed captioned, a better approach may be to support the development of an application that can automatically (and reliably) generate closed captions for any video. For example, the University of Washington provides a page with

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<sup>19</sup> Americans With Disabilities Act. <https://www.ada.gov/>

<sup>20</sup> Scott Jaschik. (2016). University May Remove Online Content to Avoid Disability Law. *Inside Higher Ed*. September 20, 2016. <https://www.insidehighered.com/news/2016/09/20/berkeley-may-remove-free-online-content-rather-complying-disability-law>

advice and links to free online tools<sup>21</sup> that help OER creators encourage viewers to help caption videos, an example of ‘crowdsourcing’ being used to support quality.

## Privacy

The UNESCO document recommends “developing and implementing policies that apply the highest standards to privacy and data protection during the production and use of OER, OER infrastructure and related services.” [III.ii.12.h] This recommendation speaks to the increasing importance of personal privacy and security in online technology, however, it is not clear what the “highest standard” would be in this case.

Many nations would support something like the European General Data Protection Regulation (GDPR)<sup>22</sup> while others may argue that such a standard is too stringent. In education, especially, there are instances where the bar is often set lower, to facilitate the deployment of (say) learning analytics and adaptive learning.<sup>23</sup> So there is not unanimity on the issue of privacy as related to OER. This is currently an area more suited to investigation rather than declaration of policy. Certainly there is a good deal of discussion taking place in the field now about data privacy and ethics in open and online learning.<sup>24</sup>

## Inclusiveness

The language of the UNESCO document speaks of “formats and standards to maximize equitable access, co-creation, curation, and searchability, including for those from vulnerable groups and persons with disabilities.” [II.9.iii] This addresses a large issue in OER, that of colonialism. Above we spoke of the need to ensure OER support and promote the voice of those from vulnerable groups and persons with disabilities. The issue of colonialism begins with voice, but extends further.

For example, in another section the UNESCO document recommends that members support “supporting OER stakeholders to develop gender-sensitive, culturally and linguistically relevant OER, and to create local language OER, particularly in indigenous languages which are less used, under-resourced and endangered.” [III.iii.13.b] But rather than, for example, paying some southern university to develop and distribute Inuktitut-language resources for the Inuit people of

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<sup>21</sup> University of Washington. (2020). Creating Accessible Videos. Undated web page; accessed February 3, 2020. <https://www.washington.edu/accessibility/videos/#free>

<sup>22</sup> European Union. (2016). General Data Protection Regulation. <https://gdpr-info.eu/>

<sup>23</sup> Paul Prinsloo and Sharon Slade. (2015). Student privacy self-management: implications for learning analytics. LAK '15: Proceedings of the Fifth International Conference on Learning Analytics And Knowledge. March 2015 Pages 83–92. <https://dl.acm.org/doi/abs/10.1145/2723576.2723585>

<sup>24</sup> Micah Altman, Alexandra Wood, David R O'Brien, and Urs Gasser. (2018). Practical Approaches to Big Data Privacy over Time. *International Data Privacy Law* March 12, 2018. [https://dash.harvard.edu/bitstream/handle/1/35165080/Practical\\_approaches\\_to\\_big\\_data\\_privacy\\_over\\_time.pdf?sequence=1](https://dash.harvard.edu/bitstream/handle/1/35165080/Practical_approaches_to_big_data_privacy_over_time.pdf?sequence=1)

northern Canada, it would be less colonial to fund Inuit communities to develop and distribute Inuktitut resources themselves.

This reflects an important policy point here. A lot of advocacy comes in the form of one person or organization recommending that another person or organization be required to perform a specific service. But as a policy it may be more effective to deploy resources to *enable* the person needing the service to obtain or produce this service for themselves.

For the most part, people do not oppose gender equality, non-discrimination, accessibility and inclusiveness. But rather than taking a stance that leans toward management and regulation, it is probably more effective to adopt a stance that is supportive and inclusive, in other words, to *enable rather than require*, and to employ regulation only where the provision of support is insufficient to move individuals or the community as a whole.

## Supporting OER

### Distribution and Access

Distribution and access are key requirements not only for OER but for learning resources in general, which is why they have so often been the focus of standards initiatives such as the IEEE Learning Object Metadata (LOM)<sup>25</sup> standard and the ISO Metadata for Learning Resources (MLR)<sup>26</sup> standard. Learning resources are typically contained in a common store, called a 'repository', where they are searched for and retrieved by means of metadata. This is the approach the UNESCO document takes. It recommends members "develop a global pool of culturally diverse, locally relevant, gender-sensitive, accessible, educational materials in multiple languages and formats." [II.9.v]

Rather than "develop a global pool", which suggests a single common supply, it would be preferable to "develop an abundance", which suggests the same result, but does not make an *a priori* stipulation on how that result would be distributed. This allows member states to consider, for example, developing a *decentralized network* of OER, an approach that would be more sustainable in both senses than a centralized 'pool'.

The UNESCO document is unfortunately vague about precisely this point. For example, it suggests "supporting the creation and maintenance of effective peer networks that share OER, based on areas such as subject matter, language, institutions, regions and level of education at local, regional and global levels." [III.v.15.c] The term 'peer networks' in this context can be a technical term, and it's not clear whether the document intends it to be used that way.

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<sup>25</sup> IEEE. (2002). 1484.12.1-2002 - IEEE Standard for Learning Object Metadata. [https://standards.ieee.org/standard/1484\\_12\\_1-2002.html](https://standards.ieee.org/standard/1484_12_1-2002.html)

<sup>26</sup> ISO-IEC. (2011). ISO/IEC 19788-2:2011. Revised 2016. <https://www.iso.org/standard/46157.html>

A ‘peer network’, sometimes called a ‘distributed network’, is one in which there is no central service, but rather, numerous member-to-member (aka peer-to-peer) connections, so that functionality (such as work, data storage, data transfer, computing, or other activities) are distributed across the network.<sup>27</sup> This is the sort of network we recommend instead of a centralized pool. On the other hand, it is possible that the authors intended the term ‘peer network’ to mean a social network composed of people who are peers with each other (aka a ‘community of practice’<sup>28</sup> to organize based on subject areas, language, etc. If this is the case (as seems likely) then the term ‘community of practice’ should be used instead of peer network.

In the end, it is arguable that both types of peer networks are well worth pursuing, and probably represent in one way or another the future of open educational resources.<sup>29</sup>

## Capacity-Building

Capacity-building [II.9.i] (as opposed to, say, resource production) is the key enabler to any OER strategy. This is especially the case with respect to non-traditional authors of OER, such as employers, research agencies, and learners themselves. The UNESCO document generally recommends an *educational* approach to capacity-building, suggesting ‘awareness’ campaigns, in-service and pre-service courses, and information and assistance.

Perhaps even more important is the recommendation toward “leveraging open licensed tools, platforms with interoperation of metadata, and standards.” [III.i.11.d] This should be applied in all government functions, where possible, and not only in the production of OER. One of the major benefits of OER is that it can be one of the major *byproducts* of other activities. Hence we hear proponents of OER also promoting the practices of ‘working out loud’ or ‘open working’, or in my domain, ‘open science’ or ‘open research’.<sup>30</sup>

## Policies and Open Mandates

It is not surprising to read the UNESCO document support “embedding OER policies into national policy frameworks and strategies and aligning them with other open policies and guiding principles such as those for Open Access, Open Data, Open Source Software and Open Science.” [III.ii.12.e] Open educational resources are but one element of a broader

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<sup>27</sup> Microsoft. (2018). What is Peer Networking? *Windows Dev Center*.

<https://docs.microsoft.com/en-us/windows/win32/p2psdk/what-is-peer-networking->

<sup>28</sup> Etienne and Beverly Wenger-Trayner. (2015). Introduction to communities of practice.

<https://wenger-trayner.com/introduction-to-communities-of-practice/>

<sup>29</sup> Stephen Downes. (2019). A Look at the Future of Open Educational Resources. *The International Journal of Open Educational Resources (IJOER)*, vol. 1, no. 2, 2019.

<https://www.ijoer.org/a-look-at-the-future-of-open-educational-resources/>

<sup>30</sup> Helen Crump. (2019). Enacting the Value of Openness by Sharing. OER19, Galway, Ireland.

<https://oer19.oerconf.org/sessions/enacting-the-value-of-openness-by-sharing-o-043/>



approach to open government and open science, and is typically employed in conjunction with such initiatives.

The document recommends adopting a number of supporting policy initiatives, including frameworks that support open licensing of publicly funded research and educational materials. [II.9.ii] In the context of other open science and open access publications, however, the policy framework has in itself been insufficient. Numerous advocates, and no small number of governments, actually support *mandated* open access for publicly funded materials. The reason for this (as advocates such as Peter Suber and Stevan Harnad have long argued) is that without mandates, compliance rates are very low.<sup>31</sup>

It should be noted that these are designated as “open access” mandates rather than “openly licensed or dedicated to the public domain”. This is because it ties to the wider issue of open government, open science, and open data, using a similar terminology. And also because “open access” entails more than just open licensing. Open access requires actually making the resource available to people where they can access it, rather than simply attaching a license to what may otherwise be a private and unshared resource.

## Sustainability

The UNESCO document recommends nurturing the creation of sustainability models for OER. [II.9.iv] However, the term ‘sustainable’ has two senses, and it is not clear whether UNESCO intends either (i) ‘sustainable’ as in ‘sustainable development’ (and therefore SDG 4) suggesting a sense of stewardship, especially of the environment, but also of cultures and values, or (ii) sustainable in the sense of fiscally possible, that is, with a business model or revenue model.

The difficulty specific to OER is that ‘sustainability models’ of the second sort imply the development of some sort of *commercial* model, so that the initiative or programme does not rely on ongoing public or government support. It is not clear, however, that OER can succeed within a commercial model. What we have seen in practice, for example, with the development of Massive Open Online Courses, is that providers, after initially receiving significant funder support, *pivot* from the provision of free learning resources, to the deployment of a commercial for-pay model. In the current case, the sustainability requirement may require just such a model of commercialization and pivot.<sup>32</sup>

The UNESCO document sometimes reads as supportive of the second model. For example, the document recommends “catalysing sustainability models, not only through traditional funding sources, but also through non-traditional reciprocity-based resource mobilisation, through partnerships and networking, revenue generation such as donations, memberships, pay what

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<sup>31</sup> Richard Poynder. (2011). Suber: Leader of a Leaderless Revolution. *Information Today* July/August 2011. <http://www.infotoday.com/it/jul11/Suber-Leader-of-a-Leaderless-Revolution.shtml>

<sup>32</sup> Justin Reich and José A. Ruipérez-Valiente. (2019). *Science Magazine*, January 11, 2019. [https://www.sciencemagazinedigital.org/sciencemagazine/11\\_january\\_2019/MobilePagedArticle.action?articleId=1455537&app=false#articleId1455537](https://www.sciencemagazinedigital.org/sciencemagazine/11_january_2019/MobilePagedArticle.action?articleId=1455537&app=false#articleId1455537)

you want, and crowdfunding that may provide revenues and sustainability to OER provision while ensuring that costs for accessing essential materials for teaching and learning are not shifted to individual educators or students; [III.iv.14.b]

These models have been known to the OER community for more than a decade.<sup>33</sup> Since then, many (if not most) of the models discussed above have been found to be deficient. In particular, there has been no wide-spread success of donations, memberships, pay what you want, and crowdfunding. Such models (DonorsChoose<sup>34</sup> is a good example) tend to disproportionately reward a small number of contributors (an example of the Power Law phenomenon)<sup>35</sup> and to shift the cost of materials onto teachers, to the point where they have been disallowed in numerous jurisdictions.<sup>36</sup>

Therefore, it could be argued that ‘sustainability’, as defined here, is an undesirable outcome, and that the purpose and objectives of OER would be better served as a public benefit rather than as a self-sustaining enterprise. And it could be argued, in relation to this, and congruently with other points about the informal uses of OER, and the need for various communities to have a voice in the creation and use of OER, that community-based OER initiatives are mostly likely to provide the best outcomes from a national government and funder perspective.

## Conclusion

From the perspective of enabling access to learning and education for all persons, the UNESCO document is a significant step forward, arguing persuasively of the need for open educational resources not only in support of SDG4 but to open the way to accessible and inclusive learning resources for all.

That said, UNESCO should reconsider whether it intends to explicitly endorse a consumer-producer model of OER, or whether it would contenance a more community-based model. It should reconsider whether it thinks of OER in terms of something that is done for learners, and supported through some sort of sustainable (or commercial) program, or whether the production and use of OER as something that learners do for themselves. And in a similar vein, it should consider whether the quality of OER is mandated and monitored, or whether it is enabled and supported.

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<sup>33</sup> Stephen Downes. (2005). Models for Sustainable Open Educational Resources. OECD.  
<https://www.oecd.org/education/ceri/36781698.pdf>

<sup>34</sup> <https://www.donorschoose.org/>

<sup>35</sup> Karina Sokolova and Charles Perez (2018). The digital ingredients of donation-based crowdfunding. A data-driven study of Leetchi projects and social campaigns. *Journal of Decision Systems*, 27:3, 146-186.  
<https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F12460125.2019.1587133>

<sup>36</sup> Sarah Schwartz. (2019). School Districts Are Banning Teachers From Using DonorsChoose. *Education Week*. March 14, 2019.  
[http://blogs.edweek.org/teachers/teaching\\_now/2019/03/donors\\_choose\\_district\\_ban.html](http://blogs.edweek.org/teachers/teaching_now/2019/03/donors_choose_district_ban.html)

In particular, UNESCO should reconsider whether the role of 'value-added' models in OER. [III.iv.14.c] The idea of a "value added models using OER" is that the OER is used as free content around which other goods and services are wrapped, effectively enclosing the OER in a commercial container. In addition to concerns about this creating cost to what would otherwise be free resources (thereby running counter to the premise that OER support no-cost access) there is a wider concern about the commodification and commercialization of individual labour and community culture.

We see this concern raised in other areas as well. In the realm of social media, there is the argument that sites such as Facebook and YouTube commercialize and monetize public discourse, using member contributions as free labour. Additionally, in the realm of big data and machine learning, there is the concern that companies such as Google and Facebook commercialize and monetize activity and social graph data, again using member contributions as free labour.

The communities that create, deploy and use OERs have contributed to our society a wealth of resources, pedagogies and practices. It is heartening to see this contribution recognized, welcomed and supported by UNESCO. It is now time for the community to work with UNESCO and with governments to ensure this wealth serves the benefit of all society, and is not regarded as a commercial asset that benefits only a few.