1. What are Open Educational Resources (OER)?

In its simplest form, the concept of Open Educational Resources (OER) describes any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that are openly available for use by educators and students, without an accompanying need to pay royalties or licence fees.

The term OER is largely synonymous with another term: Open CourseWare (OCW), although the latter may be used to refer to a specific, more structured subset of OER. An Open CourseWare is defined by the OCW Consortium as ‘a free and open digital publication of high quality university-level educational materials. These materials are organized as courses, and often include course planning materials and evaluation tools as well as thematic content’.

OER has emerged as a concept with great potential to support educational transformation. While its educational value lies in the idea of using resources as an integral method of communication of curriculum in educational courses (i.e. resource-based learning), its transformative power lies in the ease with which such resources, when digitized, can be shared via the Internet. Importantly, there is only one key differentiator between an OER and any other educational resource: its licence. Thus, an OER is simply an educational resource that incorporates a licence that facilitates reuse, and potentially adaptation, without first requesting permission from the copyright holder.

2. Is OER the same as open learning/open education?

Although use of OER can support open learning/open education, the two are not the same. Making ‘open education’ or ‘open learning’ a priority has significantly bigger implications than only committing to releasing resources as open or using OER in educational programmes. It requires systematic analysis of assessment and accreditation systems, student support, curriculum frameworks, mechanisms to recognize prior learning, and so on, in order to determine the extent to which they enhance or impede openness.

Open learning is an approach to education that seeks to remove all unnecessary barriers to learning, while aiming to provide students with a reasonable chance of success in an
education and training system centred on their specific needs and located in multiple arenas of learning. It incorporates several key principles:

- Learning opportunity should be lifelong and should encompass both education and training;
- The learning process should centre on the learners, build on their experience and encourage independent and critical thinking;
- Learning provision should be flexible so that learners can increasingly choose, where, when, what and how they learn, as well as the pace at which they will learn;
- Prior learning, prior experience and demonstrated competencies should be recognized so that learners are not unnecessarily barred from educational opportunities by lack of appropriate qualifications;
- Learners should be able to accumulate credits from different learning contexts;
- Providers should create the conditions for a fair chance of learner success.

As this list illustrates, while effective use of OER might give practical expression to some of these principles, the two terms are distinct in both scope and meaning.

3. Is OER the same as e-learning?

OER is not synonymous with online learning or e-learning, although many people make the mistake of using the terms interchangeably.

Openly licensed content can be produced in any medium: paper-based text, video, audio or computer-based multimedia. A lot of e-learning courses may harness OER, but this does not mean that OER are necessarily e-learning. Indeed, many open resources being produced currently – while shareable in a digital format – are also printable. Given the bandwidth and connectivity challenges common in some developing countries, it would be expected that a high percentage of resources of relevance to higher education in such countries are shared as printable resources, rather than being designed for use in e-learning.

4. Who will guarantee the quality of OER?

This question is possibly reflective of a deeply entrenched notion of educational materials as being ‘publications’, the quality of which is controlled by educational publishers. This notion has been – and remains – valid but reflects a partial understanding of the scope and diversity of educational materials used in many teaching and learning contexts. It also reflects a false delegation of responsibility for quality to a third party. This mindset shifts into the OER space in the form of an unstated assumption that one or more dedicated agencies should take full responsibility for assuring that OER shared in repositories online are of a high quality. In addition to this being practically impossible, it masks the reality that the definition of quality is subjective and contextually dependent.

In the final analysis, responsibility for assuring the quality of OER used in teaching and learning environments will reside with the institution, programme/course coordinators, and individual educators responsible for delivery of education. As they have always
done when prescribing textbooks, choosing a video to screen, or using someone else’s lesson plan, these agents are the ones who retain final responsibility for choosing which materials – open and/or proprietary – to use. Thus, the ‘quality of OER’ will depend on which resources they choose to use, how they choose to adapt them to make them contextually relevant, and how they integrate them into teaching and learning activities of different kinds.

This task of assuring quality has been complicated by the explosion of available content (both open and proprietary). This is both a blessing, as it reduces the likelihood of needing to develop new content, and a curse, as it demands higher level skills in information searching, selection, adaptation, and evaluation. As institutions share more educational content online, they will want to ensure that this content reflects well on the institution and may thus invest in improving its quality before making it available in repositories. In the OER environment, quality assurance will thus be assisted by the development of such repositories, which will provide at least first levels of quality assurance.

But these investments on the part of institutions will simply serve, over time, to create more opportunities for finding good materials to use. The primary responsibility for finding the right materials to use, and for using them to support effective education, still resides with the institutions and educators offering the education.

5. Shouldn’t I worry about ‘giving away’ my intellectual property?

A key concern for educators and senior managers of educational institutions about the concept of OER relates to ‘giving away’ intellectual property, with potential loss of commercial gain that might come from it. This is often combined with a related anxiety that others will take unfair advantage of their intellectual property, benefitting by selling it, plagiarizing it (i.e. passing it off as their own work), or otherwise exploiting it. These concerns are completely understandable.

In some instances, of course, when educators raise this concern, it actually masks a different anxiety – namely, that sharing their educational materials will open their work to scrutiny by their peers (and that their peers may consider their work to be of poor quality). Whether or not the concern is justified, it is important to determine what is truly driving the concerns of educators. When the concern is the loss of commercial opportunity, this requires a particular response (engaging with the incentives for sharing). But when this is masking a concern about peer and student scrutiny, this needs to be dealt with differently (and will usually involve some policy or management drive to overcome resistance to change).

As more institutions around the world are, at different levels, requiring their educators to share more materials under open licences, experiences clearly demonstrate that this opening of intellectual property to peer scrutiny is having the effect of improving quality of teaching and learning materials. This happens both because educators tend to invest time in improving their materials before sharing them openly and because the feedback they receive from peer and student scrutiny helps them to make further improvements.
While a small percentage of teaching and learning materials can – and will continue to – generate revenue through direct sales, the reality has always been that the percentage of teaching and learning materials that have commercial resale value is minimal; it is also declining further as more and more educational material is made freely accessible on the Internet. Much of the content that was previously saleable will lose its economic value while the niches for sale of generic educational content will likely become more specialized.

However, if a resource truly has potential to be exploited for commercial gain through sale of the resource, then it should be possible – and encouraged – for an educator (or an institution) to retain all-rights reserved copyright over that resource. Intellectual Property Rights (IPR) and copyright policies for education need to be flexible enough to allow the educator and/or institution to retain all rights reserved copyright for resources that have this potential commercial value.

It is becoming increasingly evident that, on the teaching and learning side, educational institutions that succeed are likely to do so predominantly by understanding that their real potential educational value lies not in content itself (which is increasingly available in large volumes online), but in their ability to guide students effectively through educational resources via well-designed teaching and learning pathways, offer effective support to students (whether that be in practical sessions, tutorials, individual counselling sessions, or online), and provide intelligent assessment and critical feedback to students on their performance (ultimately leading to some form of accreditation). Although it may seem counter-intuitive, therefore, as business models are changed by the presence of ICT, the more other institutions make use of their materials, the more this will serve to build institutional reputation and thereby attract new students. Given this, it is important for copyright holders of educational materials to consider carefully what commercial benefits they might find in sharing their materials openly. Of course, the primary benefits of harnessing OER should be educational (see ‘How can education benefit by harnessing OER?’ below), but the issue of sharing content openly may also be considered a strategy to protect oneself commercially.

The following benefits can accrue from sharing content under an open licence:

- As digitized content can so easily be shared between students and institutions, sharing it publicly under an open licence is the safest way to protect the author’s IPR and copyright; the licence can ensure that, when content is shared, it remains attributed to the original author. Open sharing of content can more rapidly expose plagiarism, by making the original materials easy to access. In addition, releasing materials under an open licence also reduces the incentive for others to lie about the source of materials because they have permission to use them.

- Sharing of materials provides institutions opportunities to market their services. Educational institutions that succeed economically in an environment where content has been digitized and is increasingly easy to access online are likely to do so because they understand that their real potential educational value lies not in content itself, but in offering related services valued by their students. These might include: guiding students effectively through educational resources (via...
well-designed teaching and learning pathways); offering effective student
support (such as practical sessions, tutorials, individual counselling sessions or
online); and providing intelligent assessment and critical feedback to students on
their performance (ultimately leading to some form of accreditation). Within this
environment, the more other institutions make use of their materials, the more
this will serve to market the originating institution’s services and thereby attract
new students.

- For individual educators, proper commercial incentives for sharing content
openly are most likely to flow when institutions have policies to reward such
activity properly. Up to now, many institutional and national policies and
budgetary frameworks have tended, at worst, to penalize collaboration and open
sharing of knowledge (by removing possible streams of income when
knowledge is shared openly) or, at best, to ignore it (as so many universities do
by rewarding research publication over other pursuits). Thus, for most educators,
the incentives lie in changing the institutional and national policies and
budgetary frameworks so that they reward collaboration and open sharing of
knowledge.

- Even if institutional and national policies and budgetary frameworks do not
reward collaboration and open sharing of knowledge, there are still incentives
for educators to share their resources openly. Open licences maximize the
likelihood of content-sharing taking place in a transparent way that protects the
moral rights of content authors. Furthermore, people who seek to ring-fence,
protect, and hide their educational content and research will likely place limits
on their educational careers. They will also increasingly be excluded from
opportunities to improve their teaching practice and domain-specific knowledge
by sharing and collaborating with growing networks of educators around the
world. Those who share materials openly already have significant opportunities
to build their individual reputations through these online vehicles (although, of
course, the extent to which they manage this will remain dependent on the
quality of what they are sharing).

6. How can education benefit by harnessing OER?

The most important reason for harnessing OER is that openly licensed educational
materials have tremendous potential to contribute to improving the quality and
effectiveness of education. The challenges of growing access, combined with the
ongoing rollout of ICT infrastructure into educational institutions, indicates that it is
becoming increasingly important for them to support, in a planned and deliberate
manner, the development and improvement of curricula, ongoing programme and
course design, planning of contact sessions with students, development of quality
teaching and learning materials, and design of effective assessment – activities all aimed
at improving the teaching and learning environment while managing the cost of this
through increased use of resource based learning.

Given this, the transformative educational potential of OER revolves around three
linked possibilities:
1. Increased availability of high quality, relevant learning materials can contribute to more productive students and educators. Because OER removes restrictions around copying resources, it can reduce the cost of accessing educational materials. In many systems, royalty payments for textbooks and other educational materials constitute a significant proportion of the overall cost, while processes of procuring permission to use copyrighted material can also be very time-consuming and expensive.

2. The principle of allowing adaptation of materials provides one mechanism amongst many for constructing roles for students as active participants in educational processes, who learn best by doing and creating, not by passively reading and absorbing. Content licences that encourage activity and creation by students through re-use and adaptation of that content can make a significant contribution to creating more effective learning environments.

3. OER has potential to build capacity by providing institutions and educators access, at low or no cost, to the means of production to develop their competence in producing educational materials and carrying out the necessary instructional design to integrate such materials into high quality programmes of learning.

Deliberate openness thus acknowledges that:

- Investment in designing effective educational environments is critically important to good education.
- A key to productive systems is to build on common intellectual capital, rather than duplicating similar efforts.
- All things being equal, collaboration will improve quality.
- As education is a contextualized practice, it is important to make it easy to adapt materials imported from different settings where this is required, and this should be encouraged rather than restricted.

7. **What is the difference between OER and open access publishing?**

Open access publishing is an important concept, which is clearly related to – but distinct from – that of OER.

Wikipedia notes that the term ‘open access’ is applied to many concepts, but usually refers either to:

- ‘open access (publishing)’; or
- ‘access to material (mainly scholarly publications) via the Internet in such a way that the material is free for all to read, and to use (or reuse) to various extents’; or
- ‘open access journal, journals that give open access to all or a sizable part of their articles’.

Open access publishing is typically referring to research publications of some kind released under an open licence. OER refers to teaching and learning materials released under such a licence. Clearly, especially in higher education, there is an overlap, as research publications typically form an important part of the overall set of materials that
students need to access to complete their studies successfully, particularly at postgraduate level.

8. Is OER related to the concept of resource-based learning?

There has been significant emphasis placed in OER discussions on the quality of OER. This makes the concept of resource-based learning of particular interest. Despite this, debates over OER have typically made little reference to the concept of resource-based learning until recently. This may be because the emphasis in most global OER discussion has been on the sharing and licensing of existing materials, a significant proportion of which has included simply sharing lecture notes and PowerPoint presentations used in face-to-face lectures.

What does the notion of resource-based learning mean, in essence? It means moving away from the traditional notion of the ‘talking teacher’ to communicate curriculum; a significant but varying proportion of communication between students and educators is not face to face but rather takes place through the use of different media as necessary. Importantly, the face-to-face contact that does take place typically does not involve simple transmission of knowledge from educator to student; instead it involves various forms of student support, for example, tutorials, peer group discussion, or practical work.

Resource-based learning is not a synonym for distance education. Rather, resource-based learning provides a basis for transforming the culture of teaching across all educational systems to enable those systems to offer better quality education to significantly larger numbers of students. Many courses and programmes at all levels of education now incorporate extensive use of instructionally designed resources, as educators have learned the limitations of lecture-based strategies for communicating information to students.

The use of resource-based learning does not of course imply any intrinsic improvements in quality of learning experience. The extent to which shifting the communication of curriculum to instructionally designed resources leads improves the quality of education depends entirely on the quality of the resources developed.

To summarize:

- There is no direct relationship between OER and resource-based learning.
- Many OER available online have not explicitly been designed as part of a deliberate strategy to shift to resource-based learning.
- Likewise, most practice in resource-based learning currently uses fully copyrighted materials rather than OER.

Nevertheless, linking OER and resource-based learning provides an opportunity to leverage both most effectively.
9. Is OER really free?

The issue of freedom and its definition has been widely debated since the advent of open licences, possibly most significantly in the Free and Open Source Software environment. Open Source and Free Software definitions specify four types of freedom:

- The freedom to run the programme, for any purpose (freedom 0).
- The freedom to study how the programme works, and adapt it to your needs (freedom 1).
- The freedom to redistribute copies so you can help your neighbour (freedom 2).
- The freedom to improve the programme, and release your improvements to the public, so that the whole community benefits (freedom 3).4

Similar considerations apply when considering licences for OER. However, there is another specific dimension of OER ‘freedom’ that warrants explicit discussion, and that is the notion of cost. Many proponents of OER advocate that a key benefit of open content is that it is ‘free’ (i.e. it does not cost anything to download – leaving aside costs of bandwidth, of course – and use). This is literally true: by definition, open content can be shared with others without asking permission and without paying licence fees. However, simplistic assertions that OER is free – and by extension that use of OER will cut costs of educational delivery – mask some important cost considerations.

Educational institutions that are serious about teaching and learning will need to ensure that their spending on personnel and other related expenses reflects a sustained effort to invest in creating more effective teaching and learning environments for their students. This will require investment in, among other things, the following:

- Developing and improving curricula.
- Ongoing programme and course design.
- Planning of contact sessions with students.
- Development and procurement of quality teaching and learning materials.
- Design of effective assessment activities.

Many educational institutions do not yet make such investments in a planned and deliberate way, but it is an essential part of their core function.

So, how does this relate to OER? As educational institutions make strategic decisions to increase their levels of investment in design and development of better educational programmes, the most cost-effective way to do this is to embrace open licensing environments and harness existing OER.

Thus, commitment to OER implies increased investment in teaching and learning, but promises to increase the efficiency and productivity of those investments by providing new ways of developing better programmes, courses and materials. Importantly, this implies a demand-driven approach to OER, where the initial rationale for embracing open licensing environments is not to release an institution’s own intellectual capital, but rather to draw in the growing wealth of openly available OER to improve the quality of the institution’s own teaching and learning.
Taking a demand-driven approach can be justified in terms of the improvements in quality that can flow from it. In addition, though, this approach to materials development is cost effective. A further advantage is that, as an obvious by-product, it will typically lead to institutions starting to share a growing percentage of their own educational materials online, released under an open licence. Most institutions and educators are instinctively nervous about this, but evidence is now starting to emerge that institutions that share their materials online are attracting increased interest from students in enrolling in their programmes. This in turn brings potential commercial benefits, because the sharing of materials online raises an institution’s ‘visibility’ on the Internet, while also providing students more opportunities to investigate the quality of the educational experience they will receive there. As students in both developed and developing countries are relying increasingly heavily on using the Internet to research their educational options, sharing of OER may well become an increasingly important marketing tool for institutions.

Most importantly, harnessing of OER requires institutions to invest – in programme, course and materials development. Costs will include the time of people in developing curricula and materials, adapting existing OER, dealing with copyright licensing and so on. (See Appendix Nine for a full list of the skills related to OER.) Costs also include associated costs, such as ICT infrastructure (for authoring and content-sharing purposes), bandwidth, running content development workshops and meetings, and so on.

However, these costs are a function of investing in better teaching and learning environments, not a function of investing in OER. All governments and educational institutions in all education sectors, regardless of their primary modes of delivery, need to be making these investments on an ongoing basis if they are serious about improving the quality of teaching and learning. Within the framework of investing in materials design and development, though, the most cost-effective approach is to harness OER. This is because:

- It eliminates unnecessary duplication of effort by building on what already exists elsewhere;
- It removes costs of copyright negotiation and clearance; and
- Over time, it can engage open communities of practice in ongoing quality improvement and assurance.

10. Where can I learn more about Creative Commons licenses and copyright?

- Visit creativecommons.org

11. Where did the questions and answers in this FAQ section come from?

All of the questions and answers in this FAQ section were taken from “A Basic Guide to Open Educational Resources (OER),” prepared for the Commonwealth of Learning by Neil Butcher and edited by Asha Kanwar (COL) and Stamenka Uvalic´-Trumbic´ (UNESCO).

Additional questions and answers may be found in the guide.