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Guidelines on the implementation of the OER Recommendation

Action Area 1: Building the capacity of stakeholders

OER 

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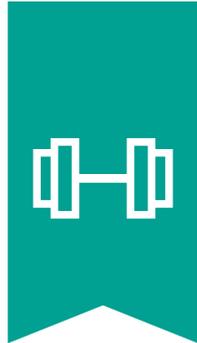
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Action Area 1: Building the capacity of stakeholders



These guides have been prepared by UNESCO, as part of its programme of the support to governments and educational institutions in the implementation of the UNESCO OER Recommendation. They draw heavily on in-depth background papers prepared by OER experts from around the world in each of the five Action Areas: Prof. Melinda dP. Bandalaria (building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER); Dr Javiera Atenas (developing supportive policy); Dr Ahmed Tlili (encouraging inclusive and equitable quality OER); Dr Tel Amiel (nurturing the creation of sustainability models for OER), and Ms Lisbeth Levey (facilitating international cooperation). We are deeply grateful for their assistance and expert knowledge. Preparation of the text of the final guides was done with support from Neil Butcher and Alison Zimmermann of OER Africa. The tables of possible actions for governments and institutions are adapted from an OER Recommendation Actions Matrix, which outlines practical activities that governments and educational institutions can consider operationalizing under the five action areas of the Recommendation. The Matrix was first developed in November 2019, using inputs from members of the Network of Open Orgs (NOO).¹

¹ The NOO is coordinated by Open Education Global (OEG) and aims to support the implementation of the UNESCO OER Recommendation. Its membership includes OEG, Community College Consortium for OER-Open Education Global, OER Africa, Open Education Policy Hub-Lab, Creative Commons, Institute for the Study of Knowledge Management in Education, European Network for Catalysing Open Resources in Education (ENCORE+), International Council for Open and Distance Education (ICDE), ICDE OER Advocacy Committee, Scholarly Publishing and Academic Resources Coalition (SPARC), SPARC Europe, European Institute for Learning, Innovation and Cooperation and the International Community for Open Research and Education, Centrum Cyfrowe, Wikimedia Foundation, Multimedia Educational Resource for Learning and Online Teaching (MERLOT)-SkillsCommons, together with representatives from higher education institutions (including University of Barcelona, University of Bonn, and Politecnico di Milano-METID, amongst others) and inter-governmental organizations such as the Commonwealth of Learning and UNESCO.





1. Introduction

The Universal Declaration of Human Rights (UDHR) states that all people have inalienable rights and fundamental freedoms that include the right to receive and impart information and ideas through any media, regardless of frontiers (Article 19) and the right to education (Article 26).² UNESCO has a constitutional commitment to ‘the free exchange of ideas and knowledge’ and supports sharing of knowledge using technologies. Digital skills and competencies are increasingly important to enable citizens to participate actively in digital transformation that supports sustainable development, to benefit from lifelong learning and employability opportunities, and to respond to global challenges. It is also important for the global community to anticipate future crises that may impact teaching and learning. This is necessary to lay the foundation for the systematic and sustainable integration of good practices for knowledge sharing and learning support in the post-COVID-19 era.

Open Educational Resources (OER) can be a vehicle for realizing Articles 19 and 26 of the UDHR and for catalysing quality education in a digitized world. OER are defined as ‘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.’ An open license is one that respects the intellectual property rights of the copyright owner, while granting the public the rights to access, re-use, re-purpose, adapt, and redistribute educational materials.³

² Universal Declaration of Human Rights. <https://www.ohchr.org/en/human-rights/universal-declaration/translations/english>

³ Recommendation on Open Educational Resources (OER). UNESCO. <https://www.unesco.org/en/legal-affairs/recommendation-open-educational-resources-oer>

OER development provides opportunities to enhance the experience of learners and educators, as well as benefit educational communities and broader society by providing access to educational resources and teaching methodologies that can be adapted according to the needs of each context, either cultural or situational. However, operationalizing OER creation, adaptation and use poses a range of challenges to educational decision-makers and stakeholders. UNESCO developed the 2019 Recommendation on Open Educational Resources (referred to as ‘the OER Recommendation’) to respond to the need to drive OER adoption. The Recommendation was adopted by consensus of all 193 Member States at the 40th Session of the UNESCO General Conference, following a two-year consultative process. It is the first UNESCO normative instrument for technologies and education and requires Member States to monitor and report on its implementation every four years.

1.1 The aim of the OER Recommendation

The OER Recommendation aims to assist Member States to support the development and sharing of openly licensed learning and teaching materials, benefiting students, teachers, and researchers worldwide. It supports the creation, use and adaptation of inclusive and quality OER, and facilitates international cooperation in this field through five Action Areas, namely (i) building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER; (ii) developing supportive policy; (iii) encouraging inclusive and equitable quality OER; (iv) nurturing the creation of sustainability models for OER, and (v) facilitating international cooperation. In addition, it contributes to the building of open and inclusive knowledge societies, and to the achievement of the 2030 Agenda for Sustainable Development, namely SDG 4 (Quality education), SDG 5 (Gender equality), SDG 9 (Industry, innovation, and infrastructure), SDG 10 (Reduced inequalities within and among countries), SDG 16 (Peace, justice and strong institutions) and SDG 17 (Partnerships for the goals). Operationalizing the Recommendation remains a challenge for governments and institutions, as it requires a range of policies, capacity building, and strategies to fully realize its potential in facilitating the achievement of these SDGs.

1.2 Objective of these Guidelines

In essence, governments and institutions are concerned with key skill areas for OER implementation:

(1) project management skills for OER content acquisition (that is, finding, adapting and creating materials, with clear and rigorous policies and strategies for procurement); (2) applying quality management criteria to be confident that the quality of OER is high, relevant and suitable to context; and (3) ensuring that users (such as teachers/educators, learners and community development initiatives) have

the capacity to find and use resources that are located online. These key issues can be tackled when policy and decision makers unpack the Recommendation and put into process concrete actions. The overall objective of these Guidelines is to support governments and institutions in their implementation of the Recommendation, by providing concrete recommended actions.

The targeted stakeholders for these Guidelines are ministries responsible for education (K-12 and tertiary), information and communication technology (ICT), human resources development, and youth. Institutions include those that provide education in the formal and informal sectors, in urban and rural contexts. Specific stakeholders impacted by strategies to implement include teachers, educators, learners, governmental bodies, parents, educational providers and (ICT) infrastructure providers, researchers, research institutions, civil society organizations (including institutions, education support personnel, teacher trainers, educational policy makers, cultural institutions (such as libraries, archives and museums) and their users, ICT professional and student associations), publishers, the public and private sectors, intergovernmental organizations, copyright holders and authors, media and broadcasting groups and funding bodies. The range is extensive; thus, it is critical to identify practical ways in which they can promote and use OER.

These Guidelines cover Action Area 1 of the Recommendation: building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER, by providing: a description/overview of the recommendations; an introduction to the specificities addressed in the implementation of Action Area 1; a matrix of actions recommended for governments and institutions to implement each point of Action Area 1; a discussion on the specificities related to Action Area 1; and examples of good practice (from different regions and contexts) in implementation of Action Area 1.

The Guidelines offer advice on how to operationalize Action Area 1 of the Recommendation. They are not prescriptive, but aim to offer suggestions for activities, as well as background on the specificities for the Action Area. Users are encouraged to contextualize the elements of these Guidelines as appropriate for their specific national and institutional contexts.



2. Description of Action Area 1

Action Area 1 of the OER Recommendation focuses on building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER. This Action Area is of critical importance in operationalizing the Recommendation on OER, as there are various categories of stakeholders, and each has specific needs. In particular, this Action Area focuses on:



- **Ensuring awareness about the added value of OER** to increase access to quality educational materials, decrease cost and empower knowledge creation; and exceptions and limitations of the use of copyright for educational and research purposes.



- **Ensuring capacity building on how to create, access, make available, re-use, adapt, and redistribute OER** in formal and non-formal training and education programmes. This may include promoting digital literacy skills to master the use of software, relevant programming code, and open licences.



- **Using openly licensed tools and platforms** with interoperation of metadata and standards to ensure OER can be accessed, re-used, and shared in a safe, secure, and privacy-protected mode.

The capacity building outlined in this Action Area includes educational design and materials development skills. It also includes information literacy and digital skills related to creating and using OER, as well as related openly licensed tools and platforms. It also emphasises the importance of understanding the strategic political and financial advantages of using OER to advance social development.

The stakeholders identified in this Action Area are teachers/educators including those working with persons with disabilities, learners, librarians, policy makers (at governmental and institutional level), educational designers and resource developers, Information and Technology (IT)/systems developers, and intergovernmental organizations. A summary of actions that target capacity building for these stakeholder groups is provided in Table 1 below.



3. Implementing Action Area 1

In this area, possible actions for which Governments can play a key role are in supporting awareness on OER to administrators and policy makers with responsibility for human resources development and education (formal and non-formal) at both K-12 and tertiary levels. Furthermore, funding and supporting capacity development of government officials to better understand and facilitate OER actions is critically important. Institutions play a key role in implementing awareness-raising as well as capacity development activities for the educational community - including teachers, administrators, learners, IT/systems developers, including those working in accessibility.

Table 1. Suggested Action Area 1 activities for governments and institutions

Governments	Institutions
Action: (a) building awareness among relevant stakeholder communities on how OER can increase access to educational and research resources, improve learning outcomes, maximize the impact of public funding, and empower educators and learners to become co-creators of knowledge.	
<ul style="list-style-type: none">• Establish a dedicated OER unit within the relevant government department (s) to support planning, implementation, and evaluation of identified OER activities• Develop and distribute suitable advocacy materials amongst identified stakeholder communities in (ideally) all official languages in the country (drawing on existing, openly licensed advocacy materials where possible and including translation into relevant local languages to widen reach and understanding)• Establish dedicated space/s on relevant government websites to distribute and share OER advocacy information and resources under open licences and post all relevant resources and updates on those spaces• Aggregate and share information on existing government OER initiatives, with information on financial investments made, reasons why government has supported the initiative, the form it has taken, and the impact it has had• Host a national ‘Open Education/OER Summit’ to raise awareness, announce national commitments of support, and celebrate in- country/regional practitioners, and engage educational leaders to share and discuss the OER value proposition	<ul style="list-style-type: none">• Establish a dedicated OER unit and/or appoint OER champions within the relevant department to support planning, implementation, and evaluation of identified OER activities, as well as ongoing awareness-raising and capacity-building• Develop and distribute suitable advocacy materials amongst institutional stakeholder communities (drawing on existing, openly licensed advocacy materials where possible and including translation into relevant local languages to widen reach and understanding)• Establish dedicated space/son institutional websites to distribute and share OER advocacy information and resources and post all relevant resources and updates on that space• Aggregate information on existing institutional OER initiatives, their focus, and the effect they have had• Organize workshops, webinars, BarCamps, roadshows, and other live engagements to raise awareness and facilitate communication about the importance of OER• Use website and other institutional communication channels to share OER success stories, from within the institution and from other institutions

Governments	Institutions
<ul style="list-style-type: none"> • Organize workshops, webinars, BarCamps, roadshows, and other live engagements to raise awareness and facilitate communication about the importance of OER • Install OER Awards, which give early adopters the chance to showcase their work and receive public praise • Provide funding for capacity building 	<ul style="list-style-type: none"> • Install OER Awards, which give early adopters the chance to showcase their work and receive public praise • Provide funding for capacity building
<p>Action: (b) providing systematic and continuous capacity building (in-service and pre-service) 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, including assistance in initial training programmes for educators. This should include improving the capacity of public authorities, policy makers, as well as quality development and assurance professionals to understand OER and support their integration into learning, teaching, research and everyday life.</p>	
<ul style="list-style-type: none"> • Define, and continuously review/update as appropriate, suitable and flexible learning frameworks and outcomes (which cover relevant skills, competences, values and aptitudes) that can be integrated into pre- service and in-service programmes targeting educators, public officials, educational managers, etc. at all levels • Where relevant, incorporate defined learning outcomes into policies, regulations, and/or national curriculum frameworks defining minimum standards for programmes targeting different kinds of education personnel • Make available (in full range of relevant languages) core educational materials (building on existing, openly licensed resources already available) that training providers can further adapt and integrate into programmes that are aligned with defined learning outcomes • Compile and maintain a catalogue of existing openly licensed professional development offerings and identify opportunities for their adaptation/use and potential to be incorporated into a comprehensive learning path or programme of offerings • Provide dedicated funding to training providers to facilitate programme adaptation to incorporate coverage of defined learning outcomes • Provide funding for the training and employment of dedicated support personnel to support teachers in making OER accessible 	<ul style="list-style-type: none"> • Ensure that suitable professional development activities on OER, open licensing, and open educational practices are available for all institutional staff and receive official recognition in terms of HR policies when completed by staff members • Compile and maintain a catalogue of existing openly licensed professional development offerings for staff • Where needed to supplement what is already available or to contextualize these to a specific institutional context, invest in institutionally relevant short courses (in locally relevant languages) that focus specifically on OER, to be made available either as MOOCs, online courses, blended courses, or face-to-face courses as appropriate (ensuring that course development harnesses and adapts existing course materials where suitable) • To complement short courses, develop/adapt and make available relevant self-learning resources for access by institutional staff, learners, and other stakeholders • Provide funding for educators, instructional designers, managers, librarians, bookstore personnel, course material specialists, lawyers, and administrators in key positions to complete relevant short courses on OER and open licensing, noting possible need for different staff types to participate in different types of courses • Provide funding for staff to attend and present their work at relevant conferences

Governments	Institutions
<ul style="list-style-type: none"> • Fund development of locally relevant short courses (in locally relevant languages) that focus specifically on OER, to be made available either as MOOCs, online courses, blended courses, or face-to-face courses as appropriate (ensuring that course development harnesses and adapts existing course materials where suitable) • Provide funding for public educational officials (including lawyers) in key positions to complete relevant short courses on OER and open licensing 	<ul style="list-style-type: none"> • Provide and facilitate mentoring and peer-to-peer capacity building methods aligned to learning and implementation of OER and open licensing • Employ and provide funding for dedicated personnel to support teachers in making OER accessible • Create transversal teams with educational technology and teaching innovation departments (together with teachers, learners and librarians) to ensure realistic integration into teaching and learning (reviewing possible problems and solutions, which are tested before large-scale implementation)
<p>Action: (c) raising awareness concerning exceptions and limitations for the use of copyrighted works for educational and research purposes. This should be enacted to facilitate the integration of a wide range of works in OER, recognizing that the fulfilment of educational goals as well as the development of OER requires engagement with existing copyright protected works.</p>	
<ul style="list-style-type: none"> • Conduct research to define specific national parameters of exceptions and limitations for use of copyrighted works • Building on research conducted (where required), develop and distribute suitable advocacy materials amongst identified stakeholder communities (including contextualization and translation into relevant local languages to widen reach and understanding) • Integrate coverage of these issues in learning standards, educational materials, and short courses mentioned under (i)(b) above 	<ul style="list-style-type: none"> • Participate in national processes to conduct research to define specific national parameters of exceptions and limitations • Building on research conducted (where required), develop and distribute suitable advocacy materials on exceptions and limitations amongst institutional stakeholder communities (including contextualization and translation into relevant local languages to widen reach and understanding)
<p>Action: (d) leveraging open licensed tools, platforms with interoperation of metadata, and standards (including national and international) to help ensure OER can be easily found, accessed, re-used, adapted, and redistributed in a safe, secure and privacy-protected mode. This could include free and open source authoring tools, libraries and other repositories and search engines, systems for long-term preservation and frontier technologies for automatic OER processing and translation of languages (where appropriate or needed), such as artificial intelligence methods and tools.</p>	
<ul style="list-style-type: none"> • Identify reputable online catalogues/curated lists from which to identify and recommend suitable openly licensed tools/platforms and • interoperable metadata and standards that can be deployed nationally in support of OER use • Share links to above sources with key educational stakeholders to encourage development of open technological architectures in support of OER and related open government initiatives (e.g., open access, open data, etc.) 	<ul style="list-style-type: none"> • Identify reputable online catalogues, curated lists, and library guides from which to identify and recommend suitable openly licensed tools/platforms and interoperable metadata and standards that can be deployed institutionally in support of OER use, ideally in cooperation with national initiatives where these are being implemented

Governments	Institutions
<ul style="list-style-type: none"> • Adopt appropriate policies to leverage use of openly licensed tools/platforms and require use of interoperable metadata and standards by all key stakeholders in education and training, during creation, adaptation, translation, and sharing of OER • Ensure that all government portals, websites, and repositories sharing OER and related information leverage use of openly licensed tools/platforms and use interoperable metadata, standards, and application programming interface (API) so that there is automated information flow and that OER, regardless of where it is produced, can be used in different educational services and found in different search services • Enable cooperation between different digital service providers (such as in the education sector and library sectors) to ensure that OER/metadata information flow occurs • Ensure that authors can upload openly licensed material created by them to an openly accessible publicly managed repository or platform (which might include simply adapting/ extending the features of existing 	<ul style="list-style-type: none"> • Share links to above sources with institutional stakeholders to encourage development and maintenance of open technological architectures in support of OER and related open initiatives (e.g., open access, open data, etc.) within the institution • Adopt appropriate institutional policies (including possible adaptation of existing policies) to leverage use of openly licensed tools/platforms and require use of interoperable metadata and standards during creation, adaptation, translation, and sharing of OER • Ensure that all institutional portals, websites, and repositories sharing OER and related information leverage use of openly licensed tools/platforms and use interoperable metadata and standards • Ensure that all relevant institutional services take the needs of OER creation and sharing into consideration (for example, ensuring that licensing information is enabled across services) • Ensure that institutional staff can upload openly licensed material created by them to a publicly managed repository or platform (including institutional repositories as appropriate) • Provide funding for maintenance and continuous improvement (version, add-on, and upgrade updates) of all of the above
<p>Action: (e) making available easily accessible resources that provide information and assistance to all OER stakeholders on OER-related topics, including copyright and open licensing of educational material.</p>	
<ul style="list-style-type: none"> • Establish dedicated space/s on relevant government websites (including APIs with relevant, standardized metadata) to distribute and share advocacy information and resources and post all relevant resources and updates on those spaces under an open licence • Ensure availability of websites, communications, and resources in all locally relevant languages to ensure widespread access and understanding • Consider implementation of a search index for locally developed materials 	<ul style="list-style-type: none"> • Establish dedicated space/s on relevant institutional website to distribute and share advocacy information and resources and post all relevant resources and updates on those spaces (tailored to different stakeholder groups, including staff, learners and communities) • Ensure availability of websites, communications, and resources in all relevant languages for the institution to ensure widespread access and understanding • Establish and provide transversal support services (innovation departments, libraries, technologists, legal units, etc.) to offer tailored assistance to institutional stakeholders

Governments	Institutions
<p>Action: (f) promoting digital literacy skills in order to master technical use of software, codes and open licenses with a view to encouraging the development and use of OER.</p>	
<ul style="list-style-type: none"> • Define what digital literacy skills related to OER are and identify means of acquiring those skills • Integrate relevant focus on digital literacy skills into learning standards, educational materials, and short courses mentioned under (i) (b) above • Review national curricula at primary and secondary levels to ensure adequate coverage of digital literacy skills • Integrate digital literacy skills into education programmes that teach ICT • Consider policy provisions to require coverage of digital literacy skills as appropriate in technical and vocational education and training (TVET) and post-secondary education programmes 	<ul style="list-style-type: none"> • Define what digital literacy skills related to OER are and identify means for institutional staff and learners to acquire those skills • Integrate relevant focus on digital literacy skills into learning standards, educational materials, and short courses mentioned under (i) (b) above • Review institutional curricula to ensure adequate coverage of digital literacy skills for all students as appropriate • Explore provision of additional extra-curricular student support services to develop digital literacy skills as appropriate
<p>Action: (g) ensuring accessibility for Persons with Disabilities</p>	
<ul style="list-style-type: none"> • Establish guidelines and standards for creating accessible OER that conform to international accessibility standards • Include accessibility training and resources within the capacity-building programs for educators and content creators to ensure they can produce content that is accessible to persons with disabilities • Collaborate with disability organizations and experts to conduct accessibility audits of OER materials to identify and address accessibility barriers • Promote the use of accessible technologies and tools for creating, sharing, and accessing OER • Ensure that all government websites, platforms, and repositories providing OER are accessible to persons with disabilities, including those using assistive technologies 	<ul style="list-style-type: none"> • Develop institutional policies and guidelines for creating and sharing accessible OER, including the use of alternative formats (e.g., accessible PDFs, captions for videos, text-to-speech functionality) • Include accessibility training as part of staff development programs to empower educators, instructional designers, and content creators with the skills to make their OER materials accessible • Establish partnerships with disability support services on campus to provide support and accommodations to students with disabilities who use OER • Encourage faculty and staff to engage with the disability community and involve persons with disabilities in the development and evaluation of OER • Create a dedicated accessibility support team or office within the institution to provide assistance, resources, and training related to accessibility for OER



4. Stakeholder capacity needs

Different stakeholder groups have specific needs in terms of capacity building to implement and use OER.

Teachers/educators

Teachers/educators play a critical role in developing, creating, re-using, adapting, and sharing OER. This was highlighted in the results of research conducted in Southeast Asia which examined OER adoption and impact in the ASEAN region.⁴ Consensus was clear not only among the educator respondents to the research but also by the ministries of education, university administrators, and the students. Educators will often use resources that are readily available in their learning programmes. To benefit fully from OER, they need skill sets that include instructional design, the ability to evaluate OER for quality purposes, the capacity to create, adapt and use OER, the networking skills to engage in communities of practice, publishing skills, and requisite ICT skills to do all of this confidently and effectively.⁵ Working with learners in creating OER can be fulfilling for teachers and rewarding for learners. It is also imperative that teachers are trained in which OER licences are available, as well as which ones to select and use when creating and publishing OER. This kind of training could take place over, say, five days, with short tutorial sessions (online or in person), and practical exercises for teachers to undertake, to develop the skills to use OER. A UNESCO training session conducted for teachers in Harare, Zimbabwe provides a useful model, as does the Zambia ICT CFT course (see detailed descriptions in the 'Examples of good practice' section in this document).

A useful guide focused on how to enable teachers/educators to effectively implement OER using the different competency levels as described in the UNESCO ICT Competency Framework for Teachers is 'Harnessing OER Project Digital Skills Development for Teachers'.⁶ The framework presents competencies ranging from

⁴ Bandalaria, M., 2019

⁵ UNESCO, COL. Guidelines for Open Educational Resources in Higher Education.
<https://unesdoc.unesco.org/ark:/48223/pf0000213605>

⁶ UNESCO. The ICT Competency Framework for teachers Harnessing OER Project Digital Skills

policy to professional learning to equip teachers with digital and pedagogical skills. One competency is 'Search for and identify OER to support syllabus outcomes', which has these specific learning outcomes: 'Search for OERs, such as lesson plans, worksheets, educational videos and images, using both specialized and common search engines ... and select open resources to teach specific syllabus outcomes.' In addition, the UNESCO/ Organisation internationale de la Francophonie (OIF) OER Competency Framework⁷ can serve as guide in the planning and implementation of capacity building initiatives for teachers. This resource outlines competencies related to awareness raising, digital literacies for using, sharing, and creating OER, as well as knowledge on available OER platforms about the skills necessary for sharing and accessing OER on these platforms. Furthermore, the Commonwealth of Learning (COL) has developed a course on Understanding OER.⁸

Regarding teachers/instructors working with learners with disabilities, OER is an important component in the strategy to promote inclusive, flexible, and agile teaching and learning ecosystems. The United Nations Convention on the Rights of Persons with Disabilities (UNCPRD) highlights the importance of reasonable accommodation, including in education and information processes.⁹ In this regard, it is important to ensure that teachers/instructors have the capacity to ensure that they have the skills to create, adapt, and share OER, which is accessible for all users, including those with disabilities, as outlined in Action Area 3: Encouraging inclusive, equitable, quality OER.

Learners

As the direct beneficiaries of OER, learners must benefit from awareness raising and capacity building. Learners need to know where and how to access OER, and they need appropriate infrastructure to access and use OER. Inclusivity and equity must be kept in mind when raising awareness, as learners need advocacy interventions in languages they understand and can use, and which meet specific learning needs they may have. About 15% of the global population lives with some kind of disability. Barriers to learning include geographical distance from learning centres, mobility difficulties, sensory issues, learning or cognitive difficulties, lack of access to appropriate resources, lack of disability friendly infrastructure, cultural factors, lack of assistive technologies, and free and low-cost education.¹⁰ Where OER exist offline in hard copy, learners need access to the materials and support for using them. Many of these barriers can be addressed by incorporating OER into learning strategies and building the capacity of teachers and other stakeholders to use OER to support diverse needs in learning.

Development for Teachers. <https://unesdoc.unesco.org/ark:/48223/pf0000383206>

7 https://unesdoc.unesco.org/ark:/48223/pf0000266159_eng

8 COL, Understanding OER Course. <https://colcommons.org/welcome/coursedetails/1>

9 UNCPRD, 2006, Article 3 - General Principles; Article 4, General Obligations, Article 9, Accessibility, Article 21- Freedom of expression and opinion and access to information, and Article 24 - Education.

<https://social.desa.un.org/issues/disability/crpd/convention-on-the-rights-of-persons-with-disabilities-crpd>

10 UNESCO. Learning for All: Guidelines on the Inclusion of Learners with Disabilities in Open and Distance Learning. <https://unesdoc.unesco.org/ark:/48223/pf0000244355>

Modules that target learners for capacity building should include where to find OER, how to evaluate OER, how to access OER using the technologies available to them, IT skills training (if required), and how to create and share their own OER. At different levels, learners may have different needs. For example, higher education students who are engaged in research need to know where to access relevant OER repositories and how to attribute the content they use; K-12 learners need to know how to use technologies to access OER and where to find it. They should also understand how to engage in forums connected to OER, as well as how to adapt and use different formats, such as visual files and text files online. Some of the course and programme modules by OER Africa described in the 'Examples of good practice' section of this document are relevant to both educators and learners.

Policy makers at institutional and governmental level

Of great value to policy makers is strengthening understanding of the added value of OER and how policies and incentives at governmental and/or institutional level can be harnessed to leverage OER to benefit overall governmental and institutional objectives. Issues for this discussion include: awareness on how OER can contribute to inclusive education and sustainable development; incentives, including public funding, to promote the use, creation, and sharing of OER; and sharing of good practices on the development of national and institutional policies relevant to OER. See the example of OER/Saide's 'OER Policy Review and Development Toolkit' in the 'Examples of good practice' section of this document.

IT and system developers

IT and system developers account for two major aspects of facilitating the use, creation, and sharing of OER: ensuring interoperability with other systems of open-source software/tools; and platforms that can be used to share OER. In addition, some institutional IT practitioners may be required to facilitate the digital skills or systems use training of users (among them teachers and learners), which includes the use of OER platforms and infrastructure. These specialists need knowledge about regulatory constraints and requirements for using and managing OER portals and systems. They also need to be skilled in evaluating the relevance, quality and cost-effectiveness of software and platforms for storing and distributing OER. Open learning may be characterized by self-paced learning and blended learning, using digital infrastructure. To effectively support digital learners, system developers must also understand the pedagogical requirements of the institution. They must be well-versed in the specific needs of the user community and how IT infrastructure meets these needs. System developers need to understand the socio-technical network aspects of OER and digital knowledge infrastructures, including: virtual learning environments, MOOCs, social media platforms, open access research repositories, online forums, email lists, open textbooks, other OER

websites, and open courseware sites.¹¹ Critically, they need to have the capacity to understand how these aspects are interconnected, so that the design of systems for using OER and open education supports learning needs and resourcing with appropriate technology.

Librarians

Libraries are centres of community interaction where a range of activities take place, including learning and resource access. They can also be online portals that serve a diverse digital community. Librarians play a crucial role in curating OER and making them available for use by members of the community (online and geographically local), teachers and students. Librarians may also be called on to advise researchers and other scholars on how to publish OER and open access content online and use different licences. In this regard, it is important that the capacity building initiatives for this sector should include awareness about OER and its potential; digital skills to access and share OER on relevant platforms, as well as potentially being able to facilitate the creation and adaptation of OER suited to user needs. They must understand copyright and open licensing limitations/exceptions and be comfortable navigating regulatory conditions that include the use of OER. Librarians also need to understand the context of the users they serve, and the range of purposes for which these users need OER. OER Africa has a useful learning pathway online ('Publish Open Access'¹²) that can be used to upskill librarians in OER, focusing on these modules of knowledge relevant to librarians: 1) What is Open Access publishing? 2) Why consider Open Access? 3) Publishing options 4) Choosing a reputable Open Access journal 5) Other Open movements. More detail is included in the 'examples of good practice' section in this document.

Intergovernmental organizations

Although not technically stakeholders, organizations relevant to OER can be enabling mechanisms for the capacity building of OER. For example, consortiums with government members from different states need to understand the commonalities they share in terms of OER requirements and provision, and then develop strategies for mobilizing resources needed for capacity building initiatives. They need clear policies and guidelines for aligning infrastructure with legal frameworks and OER provision. Examples of courses and programmes that are targeted at policy makers and discussed in the 'Examples of good practice' section of this document are also relevant to intergovernmental organizations.

¹¹ Marin, V.I. & Villar-Onrubia, D. Online Infrastructures for Open Educational resources. <https://www.researchgate.net/publication/367420500> Online Infrastructures for Open Educational Resources

¹² <https://www.oerafrica.org/communication/publish-open-access/#/>



5. Examples of good practice

The Virtual University for Small States of the Commonwealth (VUSSC)¹³:

This is a network of small countries that work collaboratively to expand access to and improve the quality of post-secondary education in their countries hosted and maintained by the Commonwealth of Learning. One benefit is that policy makers and those developing curricula (learning institutions and educators) have collaborated on the development of a Transnational Qualifications Framework, incorporating OER, and facilitated through an open process.

School of Open¹⁴:

This is an initiative run by a global community of volunteers providing free online courses, face-to-face workshops, and innovative training programmes on the meaning, application, and impact of 'openness' in the digital age and has initiatives in Kenya, South Africa, Uganda, and the United Republic of Tanzania. The School of Open also provides educational materials on topics such as adding a Creative Commons (CC) licence to work, and free resources for classroom use. It has courses (both facilitated as well as stand-alone) for learners and educators. The courses are available in different languages. One example is the course, 'OER Awareness Activities for Librarians and Academics' (Romanian). Another online course for learners is 'A Look at Open Video', which has a notional learning time of 15 hours and covers some of the issues of making, using, and editing video resources. The 'Contributing to Wikimedia Commons' course¹⁵ teaches learners and others how to upload content to Wikimedia commons and has a notional learning time of one hour. The course 'Intro to Openness in Education'¹⁶ covers the following modules: Why Openness in Education, Open Licensing, From Open

¹³ <https://vussc.col.org/>

¹⁴ <http://schoolofopen.p2pu.org/>

¹⁵ <https://courses.p2pu.org/en/groups/contributing-to-wikimedia-commans/>

¹⁶ <https://courses.p2pu.org/en/courses/140/intro-to-openness-in-education/>

Source to Open Content, From OpenCourseWare to Open Educational resources and Open Textbooks, Open Access, Open Data, and Open Science, Open Teaching and MOOCs, Open Assessment and Open Badges, and Open Policy. This course is relevant to educators and librarians, but also to policy makers who may be embarking on developing policies and frameworks for implementing OER.

Partnership for Enhanced and Blended Learning Programme (PEBL)¹⁷:

This consortium of 24 participating universities across Kenya, Rwanda, Uganda, and the United Republic of Tanzania enriches East Africa's growing ecosystem of blended learning users through ongoing institutional capacity building and resource-sharing efforts. In 2019, PEBL uploaded the first batch of online modules in OER Africa.

The African Council for Distance Education (ACDE)¹⁸:

This continental educational organization comprises African universities and other higher education institutions committed to expanding access to quality education and training through Open and Distance Learning (ODL) including e-Learning. A key priority relevant for building capacity among policy makers is to 'influence the development and implementation of distance education and open learning policies at national level'.¹⁹

OER Africa/South African Institute for Distance Education 'OER Policy Review and Development Toolkit' (for policy makers):²⁰

OER Africa hosts a toolkit developed by the South African Institute for Distance Education (Saide) for policy makers and institutional decision makers (in higher education) that present key policy considerations and how to develop them. Modules include: Policy changes needed for institutions to make more effective use of OER; and OER-friendly policies for students, institutions, and government. Quality assurance bodies' and other stakeholders' considerations for OER policy are also included, as are policy implications of the use of OER in Open and Distance learning and e-Learning, together with issues related to cross-border provision, and Policy tools and guides. The Toolkit can be used in different ways - as a reference for developing policy or for a framework for a workshop or series of workshops for decision makers. It carries a CC BY 3.0 licence, which means that it can be copied and redistributed, remixed, and transformed for any purpose, even commercially. This means that the material can be used to develop training programmes, with timings to suit the context and needs of the participants.

¹⁷ <https://www.suza.ac.tz/pebl/#:~:text=PEBL%20partnership%20will%20enable%20universities,and%20face%20to%20face%20teaching>

¹⁸ <https://acde-afri.org/>

¹⁹ <https://acde-afri.org/priority-areas/>

²⁰ OER Africa/Saide. 2012. OER Policy Review and Development Toolkit. <https://www.oerafrica.org/resource/oer-policy-review-and-development-toolkit>

UNESCO Harare/Ministry of Primary and Secondary Education (MoPSE)

Zimbabwe/OER Africa course 'Developing learning materials using OER':²¹

This comprehensive course for educators, includes the modules: 1) What are OER? 2) Benefits of OER, 3) Open licensing, 4) How to find OER, 5) How to create OER and 6) How to share OER. The course was run over five days, with learning outcomes that required teacher participants to demonstrate understanding and practical application throughout the five modules. By the end of the course, teachers were equipped to engage fully with OER. The course can be run as a face-to-face training session, but in this case, it was facilitated online (due to COVID-19 pandemic restrictions). Sessions were conducted using the Zoom platform and were recorded. The recorded sessions were uploaded to the OER Africa site, where they are open and available to anyone to view and use. There is a PDF document with learning content for each tutorial session, also available to download from the site. This course is licensed under a CC Attribution 4.0 International License.

OER Africa's Find Open Content course:²²

This is an example of a short and simple tutorial that teaches people working with OER (for example, teachers and librarians) to acquire the necessary skills to search for open content, decipher Creative Commons (CC) rights and permissions, and evaluate the usefulness of OER for new purposes. Modules include: 1) Why find and use open content? 2) What is open licensing? 3) What is open content? A practical course component teaches participants how to search for open content using Google, Creative Commons, YouTube, and open repositories, and how to evaluate open content. There is an assignment that participants can do, to put their skills into practice. The tutorial is open, and can be used independently by teachers or librarians, or facilitated as part of a group training session. Find open content is one of a suite of tutorials, which includes adapting OER and publishing, using open access (discussed above).

WIPO Academy Distance Learning Courses:²³

Since 1999, the WIPO Academy has offered distance learning courses, covering all aspects of intellectual property (IP), to professionals and stakeholders new to the field. It is the only institution that offers online IP courses in more than ten languages. The offerings include hybrid, executive and certification courses. WIPO also customizes its courses to assist national IP offices and universities who wish to create localized IP training content.

²¹ <https://www.oerafrica.org/book/unesco-harare-ministry-primary-and-secondary-education-mopse-zimbabwe-oer-africa>

²² <https://www.oerafrica.org/communication/find-open-content/index.html#/>

²³ WIPO Academy Distance Learning Courses. https://www.wipo.int/academy/en/courses/distance_learning/

UNESCO ICT Competency Framework for Teachers (ICT-CFT):²⁴

The ICT-CFT seeks to help countries develop comprehensive national ICT competency policies and standards and integrate these in overarching ICT in education plans. It is designed to guide pre- and in-service teacher training on the use of ICT. The framework has been used to develop OER-based teacher training material in several countries in the global South. It was first rolled out in Guyana, then in Egypt, Djibouti, Kenya, Mozambique, Rwanda, South Africa, Togo, Tunisia Zimbabwe, and other countries are currently planning courses. The countries use the same basic course but adapt it to meet their curriculum requirements, language needs, and relevant examples. UNESCO also developed a generic CFT in 2021, which will make adaptation based on country curriculum needs easier in the future.²⁵ The CFT was developed in collaboration with the appropriate government agencies in each country. In 2022 an ICT CFT course was facilitated in Zambia²⁶ using Moodle and Zoom, with course content made available online. The modules are: (1) Access to digital resources, (2) Basic ICT skills for teaching and learning, (3) Implications of technology use, (4) Technology mediated learning spaces, and (5) technology to support knowledge creation.

Southeast Asian Ministers of Education Organization (SEAMEO)²⁷:

This regional intergovernmental organization was established in 1965 among the governments of Southeast Asian countries to promote regional cooperation in education, science, and culture. It conducts, through its various centres and the Secretariat, capacity building programmes on OERs.

Asian Association of Open Universities (AAOU)²⁸:

With more than 60 member institutions, mostly open universities, it conducts capacity building programmes on OER as part of its advocacy on open education. AAOU's work is relevant to policy makers and programme leaders in higher education.

Open universities:

Many open universities across all regions advocate for the use, creation and sharing of OER as part of open education practice. Likewise, these institutions conduct capacity building programmes on OER. For example, in the Philippines and in most Southeast Asian countries various initiatives to train teachers on how to search, access and use OER were conducted by the University of the Philippines Open University and the SEAMEO to help prepare the transition of academic institutions to remote online instruction during the COVID-19 pandemic. In Africa,

²⁴ <https://www.unesco.org/en/digital1-competencies-skills/ict-cft>

²⁵ UNESCO created a CFT hub on the DER Commons platform, which can be found at <https://www.oercommons.org/hubs/UNESCO>

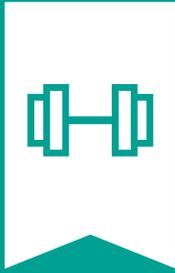
²⁶ Zambia ICT Competency Framework for teachers Course. UNESCO. Facilitated by Andrew Moore. <http://vle.tvtc.ac.zm/course/index.php?categoryid=4>

²⁷ <https://www.seameo.org/w5>

²⁸ <https://www.aaou.org/>

the ACDE established a Technical Committee on Collaboration (ACDE-TCC), hosted by the Open University of Tanzania, to synchronize Open and Distance Learning (ODL) initiatives in Africa, including the development of learning materials. One of its current programmes is the 'ACDE Quality Assurance and Accreditation Agency (ACDE-QAAA)' hosted by the National Open University of Nigeria (NOUN). It is mandated to develop an indigenous model of quality assurance and accreditation that will serve to position continental ODL practices and programmes in the global community. This kind of programme supports capacity-building for policy makers and curriculum designers, because one of the challenges of OER (which may be used in ODL) is how to ensure quality. The ACDE ODL Database, hosted by the University of South Africa (Unisa) serves as a central information hub to assist research communities, policy makers, governments, non-government organizations, development agencies and ODL practitioners and students with relevant information about ODL in Africa, which includes OER development.²⁹

²⁹ <https://acde-afri.org/programmes/>



For further information please contact:

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<https://www.unesco.org/en/open-educational-resources>

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