

# **A Government Policy Development Template to Progress Effective Implementation of Open Educational Resources (OER)**

## **An Argument for Including OER in Country Policies**

At its core, Open Educational Resources (OER) is a simple legal concept: it describes educational resources that are openly available for use by educators and students, without an accompanying need to pay royalties or licence fees. Different options are emerging that can be used to define how OER are licensed for use (and adaptation as appropriate), some of which simply allow copying and others that make provision for users to adapt the resources that they use. The best known of these are the Creative Commons licences (see [www.creativecommons.org](http://www.creativecommons.org)), which provide legal mechanisms to ensure that people can retain acknowledgement for their work while allowing it to be shared, and can choose to restrict commercial activity if they so wish or prevent people from adapting work if appropriate (although this may be legally difficult to enforce).

The emergence of open licences has occurred in an effort to protect an author's rights in environments where content (particularly when digitized) can so easily be copied and shared on the Internet without asking permission. Digitization of information in all media, combined with its increasingly widespread access, has introduced significant challenges regarding how to deal with issues of intellectual property such as copyright. The ability for anyone to copy and share content once it has been digitized creates both opportunities and challenges for education providers. The main challenges relate to the ease with which digitized content can be copied and shared, with or without the permission of the copyright holder. Thus, open licences seek to ensure that this copying and sharing happens within a structured legal framework that is more flexible than the automatic all-rights reserved status of copyright.

However, the concept of OER has emerged as having great potential to support educational transformation, given its principle of the right to education by all. It is considered a worthwhile option, particularly in the context of spiraling education costs and the need to make education more accessible, affordable and useable. It has thus become a subject of heightened interest in policy-making as countries explore its potential to contribute to improved delivery of education and tackle some of the key problems facing education systems.

Many proponents of OER consider 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). This is literally true for the end-user: by definition, open content can be shared with others without asking permission and without paying licence fees. However, there are some important cost considerations to be taken into account.

Effective harnessing of OER first requires that governments and education institution invest systematically in programme, course, and materials development/acquisition. Costs will include wages for the time of people in developing curricula and materials, adapting existing OER, dealing with copyright licensing (if material is not openly licensed), and so on. It also includes associated costs such as ICT infrastructure (for authoring and content-sharing purposes), bandwidth expenses, and costs of running workshops and meetings when content development teams meet, and so on.

All governments and institutions need to be making these investments on an ongoing basis for the improvement of quality of teaching and learning. The most cost-effective way to invest in materials design and development is to incorporate effective adaptation and use of OER, because it eliminates unnecessary duplication of effort by building on what already exists elsewhere, takes advantage of pooled alternative resources to meet accessibility obligations, removes costs of copyright negotiation and clearance, and – over time – can engage open communities of practice in ongoing quality improvement and quality assurance.

Despite the great potential of OER, there are several challenges in using and creating OER, especially in developing country contexts. For example, being able to access OER requires adequate ICT infrastructure and a robust and fast connection to the Internet, which is still lacking in many institutions. As available OER may not always match methods or subject matter as taught locally, there may also be a need to train and capacitate staff to source and adapt OER. In addition, due to unfamiliarity with OER implementation model, there is a need for lobbying around the benefits of OER to encourage buy in from educators and academics to use OER.

Nevertheless, the challenge of growing enrolment with limited increases in resources, combined with the ongoing rollout of ICT infrastructure into society, means it is becoming increasingly important for educational systems to support, in a planned and deliberate manner, the development and improvement of curricula, ongoing programme and course design, planning of effective contact sessions with students, meeting the needs of a greater diversity of learners, development of quality teaching and learning materials, and design of effective assessment. All of these activities aim to improve the teaching and learning environment while managing cost through increased use of resource-based learning. OER manages this investment and the resulting copyright issues in a way that creates significant opportunities for supporting ongoing improvements in the teaching and learning process. It also helps significantly to tackle the challenge of managing growing student enrolments.

## **The Role of Government Policy in Stimulating Effective Use of OER in Education**

Governments play a crucial role in setting policies that help to shape the direction of education systems, and policies can accelerate or impede the adoption and creation of OER. Additionally, the presence of country policies that are supportive of OER can be used as a gauge to determine levels of commitment to OER. The lack of such frameworks can limit and delay the process of adoption or may even discourage institutions from pursuing OER undertakings.

Recent arguments calling for the inclusion of OER in countries policies have postulated that, if education is paid for by the public, then content and research produced with those public funds should be publicly available. This has led to calls for governments to institute a policy that ‘all publicly funded resources are openly licensed resources’.<sup>1</sup> Having government policies that institutionalize support for OER can ensure

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<sup>1</sup> Wiley, D., Green, C., & Soares, L. (2012). Dramatically bringing down the cost of education with OER: How open education resources unlock the door to free learning. Retrieved from <http://www.educause.edu/library/resources/dramatically-bringing-down-cost-education-oer-how-open-education-resources-unlock-door-free-learning>

that the quality of learning materials are improved and costs of content development are reduced by sharing and reusing. Furthermore, open sharing will accelerate development of learning resources.<sup>2</sup>

Governments have an interest in ensuring that public investments in education make a meaningful, cost-effective contribution to socio-economic development. Sharing educational materials produced using public funding has significant potential to improve the quality and accessibility of educational delivery across national education systems by making OER more readily available for use by all education providers, not just the recipient of the public funds.<sup>3</sup> As governments often play a key role in policy development and funding of educational institutions and as policies on education funding also indicate key priorities, governments are ideally positioned to encourage or mandate institutions to release materials as OER and to license materials developed with public funding under an open licence. Government can also use open licensing regimes to increase the leverage of public investments, by facilitating widespread re-use of those investments with minimal additional investment.<sup>4</sup>

Academic policy makers and government officials thus have a unique opportunity to improve learning outcomes, reduce costs, and improve the quality of teaching by facilitating effective sharing and use of OER in policies. Doing so will also have significant multiplier effects as the quantity of free, high-quality open learning materials steadily increases and the most relevant materials become easier to find.<sup>5</sup> Without this policy leadership, the opportunities presented by the still mostly grassroots OER movement will not be effectively harnessed and this movement will continue to operate primarily on the periphery of the education establishment rather than closer to its core where its impact would be truly transformative.<sup>6</sup>

Such moves are increasingly recognized as important, particularly in light of the 2012 UNESCO World OER Congress, at which both governments and educational and OER experts were present, and the Paris OER Declaration which represents the advice of the experts to governments (see Appendix B for the Paris OER Declaration).

## Introducing the OER Country Policy Template

This policy template provides an outline of various issues pertinent to creating an OER policy at government level, combined with samples of wording that might be used to frame country policies on OER. This wording is not intended to be prescriptive, but rather to provide practical guidance on the potential scope of coverage of policy statements.

Whilst this document can be used as a template for a distinct OER policy, the various issues presented might also be incorporated into existing national policies, to ensure that they make specific provision for OER. Whichever approach is taken, the policy position would need to be consistent with the vision and mission of the country's education system. Note that policies can differ in their format and design,

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<sup>2</sup> Rossini, C. <http://www.slideshare.net/carolina.rossini/oer-policy-and-developing-countries>

<sup>3</sup> UNESCO/COL. (2011). Guidelines for Open Educational Resources (OER) in Higher Education Retrieved from <http://www.col.org/resources/publications/Pages/detail.aspx?PID=364>

<sup>4</sup> UNESCO/COL. (2011). Guidelines for Open Educational Resources (OER) in Higher Education Retrieved from <http://www.col.org/resources/publications/Pages/detail.aspx?PID=364>

<sup>5</sup> Butcher, N. (2011). A Basic Guide to Open Educational Resources (OER), the Commonwealth of Learning.

<sup>6</sup> Plotkin, H. (2010) Free to Learn - An Open Educational Resources Policy Development Guidebook for Community College Governance Officials. Creative Commons: San Francisco

depending on the specific requirements of a country, and this template is intended to provide an outline of broad considerations for inclusion in an OER policy.

Each section provides an introduction to key issues in policy making and is followed by a table summarizing key policy issues and providing sample statements that governments can use to consider suitable positions in outlining the key policy issue. In the tables, sample statements are *italicized*, and, in instances where these are taken directly from existing policy documents, they are referenced. Where there is no reference, the sample statement has been fabricated. In other instances, explanations for what might be included in a policy statement are provided. These are noted in plain text bulleted points.

Whilst the aim is to ultimately produce an OER policy, there are several processes that may need to be followed before finalizing the policy. Of course, the processes will differ across countries depending on specific rules regarding policy development and implementation, as well as the current status of different existing policies. Nevertheless, applying the template is likely to involve the following processes in order to convert the template into a national policy:

- A review of existing related policies is a logical starting point, in order to determine whether there are gaps in relation to OER, and whether related policies are supportive of increased collaboration, sharing of course materials, and harnessing of OER.
- Based on this review, key decisions are required on preferred positions for each of the key policy issue outlined in the tables below. This might require a standard process of policy consultation. A consultation process with key stakeholders provides an opportunity to build consensus, support transparency, and test whether the policy reflects key issues and concerns. Inadequate consultation can likely result in poor policy that cannot be effectively implemented, or in deliberate or inadvertent non-compliance. However, it should be noted that consultation can be a time-consuming and labour-intensive process, and therefore a decision needs to be made about what degree of consultation is appropriate.
- Once positions are clearly defined, the next step will typically be to decide whether a new, separate policy is required or whether amendments should be made to existing policies.
- Policy makers may wish to consider licensing the policy using an appropriate open license. This will also provide a demonstration of how works should be licensed.
- There is also a need to consider procedures to follow to implement the policy. This involves preparing an implementation plan, which will include how the policy will be disseminated, how to ensure it is put in practice as well as a management plan and a time frame.
- Finally, there is merit in undertaking a policy review, which includes reviewing, evaluating and reporting the results of carrying out the policy. A timeframe for policy review should also be considered. This process will help in ascertaining levels of resistance and determine whether remedial action is necessary.

# An OER Country Policy Template

## Introduction

The introduction to an OER policy will typically provide an overview of the policy and clearly articulate the goals of the policy. It also usually outlines the purpose and rationale of the policy, providing an indication of why the policy is necessary and what it will accomplish. Key issues to consider are outlined below:

Key Policy Issue	Sample Statements/Scope of Coverage
Mission and objective of the policy	<ul style="list-style-type: none"> <li>• This will provide a clear orientation to the policy</li> <li>• It can also include the guiding principles or goals of the policy: <i>'cultivate the culture and practice of using and contributing to open educational resources'</i><sup>7</sup></li> </ul> <p><i>The goals of this policy are to provide students with learning materials that reside in the public domain to augment and/or replace commercially available educational materials, including textbooks where appropriate, to create sustainable academic resources for students, faculty and staff, and to provide opportunities for professional growth of district employees involved in these activities.</i><sup>8</sup></p>
Policy context	<ul style="list-style-type: none"> <li>• This will usually cover an overview of the context of the policy and intended effects on the country</li> <li>• It may also identify key challenges facing the country in education</li> </ul> <p><i>Education in Brazil has changed significantly for the better in the last several years. However, there are serious problems related to quality, equity, inappropriate use of or lack of resources and under-trained teachers as found by a 2009 national exam performed by the Ministry of Education....</i><sup>9</sup></p>
Overview of OER	<ul style="list-style-type: none"> <li>• This will include a glossary of terms (including OER, OCW, and Open Access Research). See for example, <a href="http://wiki.oercommons.org/mediawiki/index.php/Glossary">http://wiki.oercommons.org/mediawiki/index.php/Glossary</a>; and <a href="http://wikieducator.org/OER_Handbook/Glossary">http://wikieducator.org/OER_Handbook/Glossary</a></li> <li>• It will also focus on the benefits and challenges of using and developing OER in the specific country context. For more detail on these benefits and challenges, refer to: Butcher, N. (2011). A Basic Guide to Open Educational Resources (OER), the Commonwealth of Learning.</li> </ul> <p><i>...using open educational resources – and contributing to them – requires significant change in the culture of higher education. It requires thinking about content as a common resource that raises all boats when shared. It requires replacing our 'not invented here' attitude with a 'proudly borrowed</i></p>

<sup>7</sup> State Board for Community and Technical Colleges. Strategic Technology Plan, p.17

<sup>8</sup> Foothill-De Anza Community College District Board of Trustees. (n.d.) Public Domain - Board Policy Manual. Retrieved from: <http://fhdafiles.fhda.edu/downloads/aboutfhda/6141.pdf>

<sup>9</sup> Rossini, C. (2010). Green---Paper: The State and Challenges of OER in Brazil: from readers to writers?

Key Policy Issue	Sample Statements/Scope of Coverage
	<i>from there' orientation. And it requires a new willingness to share and distribute the best of our own course content...</i> <sup>10</sup>
Scope of the policy	<ul style="list-style-type: none"> <li>This would usually include a clear statement about who the policy applies to and what it will cover.</li> </ul>
A brief explanation of how the proposed strategy articulates with or requires changes to the existing policy (in the instance of a stand-alone policy)	<ul style="list-style-type: none"> <li>Stand-alone OER policies should be clearly tied to older, related policies. Where OER-related positions are integrated into existing policies, this may not apply.</li> <li>An OER policy is likely to impact on other related policies such as human resource policies, ICT policies, teaching and learning policies, open access research policies, government tendering and procurement protocols, and strategic plans. Whilst these are all distinct, the OER policy should align to these policies. For example, government tendering and procurement processes should ideally make provision for collaboration where this can add value, rather than encouraging individuals and institutions to work in isolation.</li> </ul> <p><i>This policy should be read in the context of the following documents and policies:</i></p> <ul style="list-style-type: none"> <li><i>Vision 2012</i></li> <li><i>Open Access Research policy</i></li> <li><i>Policy in respect of exploitation of intellectual property</i></li> </ul>
Areas of responsibility	<ul style="list-style-type: none"> <li>List departments, units, offices, and individual job titles for those who have responsibility for aspects of the policy.</li> </ul>
Status of the policy	<ul style="list-style-type: none"> <li>If there has been a process of consultation around developing the policy, or if it has been through a review and approval process then this could be mentioned here.</li> </ul>

## Intellectual Property Rights and Licensing

Intellectual Property Rights (IPR), copyright and licensing issues permeate discussion and debate on creation and reuse of OER and are therefore at the heart of OER, as they have important implications for creators and users. OER policies therefore generally specify the open licences that should be used.

Governments need to determine whether there is a need to establish policy parameters around IPR, including copyright, with respect to public investments in teaching and learning. This is likely to differ across countries. Some countries already have well-established policies and legislation that governs, for example, IPR in research in the higher education sector, while many higher education institutions around the world have developed IPR and copyright policies. These policies are becoming increasingly important, particularly given the significant challenges posed to traditional copyright regimes by the digitization of content. This requires consideration of what Intellectual Property (IP) regimes should govern public investments in public education programmes. It also requires clarity on IPR and copyright on works created during the course of employment or study and how these may be shared with and used by others. Furthermore, there have been several arguments made for enabling at least some of the intellectual capital from public investments to become more widely accessible for the public good under

<sup>10</sup> Washington State Board for Community and Technical Colleges. (2008). Strategic Technology Plan For Washington State Community and Technical Colleges. Olympia: State Board for Community & Technical Colleges. p.11

some form of open licence. Amongst other benefits, this could help to eliminate unnecessary duplication of public spending.

Different options are emerging that can be used to define how OER are licensed for use (and adaptation as appropriate), some of which simply allow copying and others that make provision for users to adapt the resources that they use. The best known of these are the Creative Commons licences, which provide legal mechanisms to ensure that people can retain acknowledgement for their work while allowing it to be shared, and can choose to restrict commercial activity if they so wish or prevent people from adapting work if appropriate (See Appendix B for an overview of Open Licences). Creative Commons has also created an OER Policy Registry which indicates legislation, institutional policies, and/or funder mandates that lead to the creation, increased use, and/or support for improving OER. See [http://wiki.creativecommons.org/OER\\_Policy\\_Registry](http://wiki.creativecommons.org/OER_Policy_Registry) for more information.

In considering the licencing model, it may be necessary to consider multiple options for licences in order allow institutions and users to gain most benefit from OER movement. For example, it can stipulate that all new materials adopt a CC-BY licence which required users of the materials to follow the license conditions. However, it may also stipulate conditions under which adapted materials sourced from materials that do not have a CC-BY licence are licensed (which would require produced material to follow the conditions of the used materials). The policy may therefore wish to either specify a general rule to be followed, or it may create scenarios to allow multiple options for licences to be adopted.

Thus, an OER policy could consider the following:

Key Policy Issue	Sample Statements/Scope of Coverage
Reference to the country's copyright and information laws and note how this policy fits in with those laws	<p><i>The Brazilian law n. 9610/98 regulates copyright and adopts the system of exceptions and limitations to grant rights to those who access knowledge...The main copyright statute (Lei 9.610/98), the 1940 Penal Code (recently altered in its copyright-related matter by Lei 10.695/03) and Software Law (Lei 9.609/98) form the system that regulates copyright in Brazil.<sup>11</sup></i></p> <ul style="list-style-type: none"> <li>• The policy may also note copyright laws which need to be amended to expand and formalize exceptions and limitations related to education.</li> </ul>
Description of the open licence to be adopted	<ul style="list-style-type: none"> <li>• <i>The policy can indicate which is the default licence to be adopted (and if there are any exceptions to this). It can highlight conditions of use of different licences.</i></li> <li>• <i>Sharing should be the default expectation, not the exception.</i></li> <li>• <i>It may also explain what the open license covers.</i></li> </ul> <p><i>Unless a restriction in paragraph 29 applies, State Services agencies should make their copyright works which are or may be of interest or use to people available for re-use on the most open of licensing terms available within NZGOAL (the Open Licensing Principle). To the greatest extent practicable, such works should be made available online. The most open of licensing terms available within NZGOAL is the Creative Commons Attribution (BY) licence.<sup>12</sup></i></p>

<sup>11</sup> Rossini, C. (2010). Green---Paper: The State and Challenges of OER in Brazil: from readers to writers?

<sup>12</sup> New Zealand Government States Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1.

Key Policy Issue	Sample Statements/Scope of Coverage
	<ul style="list-style-type: none"> <li>• <i>The licence may indicate the specific licence to be adopted: All public administration will be free under a Creative Commons Attribution License (CC BY 3.0), meaning it can be reused and shared for any purpose, with only attribution necessary.</i><sup>13</sup></li> </ul> <p><i>Materials produced which do not indicate any specific conditions for sharing will automatically be considered to have been shared under a Creative Commons Attribution license.</i><sup>14</sup></p> <p><i>All digital software, educational resources and knowledge produced through competitive grants, offered through and/or managed by the SBCTC, will carry a Creative Commons Attribution License</i><sup>15</sup></p> <p><i>The Creative Commons (BY) licence has been chosen as the default licence because it is the most open of all the CC licences. Effectively, all it requires a user to do is attribute the original authorship of the materials when using or adapting them, but otherwise leaves them free to adapt them as they deem necessary and use them in whatever way they wish. There may be instances where it is necessary to add further restrictions within the CC licence framework (possible applying a Non-Commercial restriction to prevent commercial use of materials, a Share-Alike restriction to require people adapting materials to release the adapted resource under a similar licence, or a restriction to prevent adaptation of the resource). However, imposition of additional restrictions will be managed as exclusions rather than as a matter of policy in order to ensure the maximum possible openness wherever possible.</i><sup>16</sup></p> <ul style="list-style-type: none"> <li>• The policy may provide a general indication of the licence to be adopted or multiple licence options with the decision left to the user to determine which specific licence to adopt.</li> </ul> <p><i>Australian governments should adopt international standards of open publishing as far as possible. Material released for public information by Australian governments should be released under a Creative Commons licence.</i><sup>17</sup></p> <p><i>AusGOAL incorporates:</i></p> <ul style="list-style-type: none"> <li>• <i>A licence suite that includes: the Australian Creative Commons Version 3.0 licences, the AusGOAL Restrictive Licence Template and the BSD 3-Clause software licence</i></li> <li>• <i>Licensing tools: an AusGOAL Microsoft Office App (coming soon), the Licence Chooser tool, and 'Licence Manager' licence injector software...</i><sup>18</sup></li> </ul> <p>67      <i>NZGOAL consists of:</i></p> <p>(a)      <i>the six Creative Commons New Zealand law licences; and</i></p> <p>(b)      <i>a template "no known rights" statement for non-copyright material.</i></p>

<sup>13</sup> Park, J. (2011). Open Government Data in Austria. Retrieved from <http://creativecommons.org/weblog/entry/28744>

<sup>14</sup> KNUST OER Policy

<sup>15</sup> Washington State Board for Community and Technical Colleges. (2010). Regular Meeting Agenda Item June 17, 2010 - Open Licensing on Competitive Grants. Retrieved from [http://www.sbctc.edu/general/admin/Tab\\_9\\_Open\\_Licensing\\_Policy.pdf](http://www.sbctc.edu/general/admin/Tab_9_Open_Licensing_Policy.pdf)

<sup>16</sup> SAIDE OER policy

<sup>17</sup> [http://wiki.creativecommons.org/Case\\_Studies/Australian\\_Bureau\\_of\\_Statistics](http://wiki.creativecommons.org/Case_Studies/Australian_Bureau_of_Statistics)

<sup>18</sup> AusGOAL (2011). Retrieved October 10, 2011 from <http://www.ausgoal.gov.au/overview>

Key Policy Issue	Sample Statements/Scope of Coverage
	<p>68 <i>It also provides guidance on certain issues that agencies may wish to take into account when they have a genuine need for a copyright licence that is more restrictive than the Creative Commons licences.</i></p> <p>69 <i>The Creative Commons licences are expected to cover the clear majority of State Services agencies' copyright licensing requirements and, over time, to result in considerably greater consistency in licensing approaches across the State Services...</i><sup>19</sup></p>
Parameters of what IPR would cover	<p><i>IPR covers access to materials that were directly paid for by public funds, public institutions, works created by staff at public institutions, students receiving government scholarships, and educational materials produced by government departments and agencies.</i></p>
How to ensure copyright/open licence	<ul style="list-style-type: none"> <li>• Ensuring copyright ownership or right to sub-licence.</li> </ul> <p><i>Agencies should only license a copyright work for re-use by others where they:</i></p> <ul style="list-style-type: none"> <li>– <i>own the copyright in the relevant work and have not exclusively licensed it to a third party; or</i></li> <li>– <i>to the extent they do not own the copyright, either:</i></li> <li>– <i>can first obtain an assignment of copyright from the relevant copyright owner(s); or</i></li> <li>– <i>(ii) have or can first obtain a right to sub-licence the work (or relevant elements of the work)7 on the terms of their preferred licence (such as a Creative Commons licence) from the relevant copyright owner(s).</i><sup>20</sup></li> </ul>
Limitations or restrictions to the licence	<ul style="list-style-type: none"> <li>• This may cover issues such as non-discrimination, using trademarks, emblems etc.</li> <li>• It may also be useful to consider the relative merits of creating flexible copyright policies that automatically apply open licences to content unless there are compelling reasons to retain all-rights reserved copyright over those materials. Simultaneously, though, these policies should make it easy for staff to invoke all-rights reserved copyright where this is justified.</li> </ul> <p><i>If the Information Provider does not provide a specific attribution statement, or if you are using Information from several Information Providers and multiple attributions are not practical in your product or application, you may consider using the following:</i></p> <ul style="list-style-type: none"> <li>• <i>ensure that you do not use the Information in a way that suggests any official status or that the Information Provider endorses you or your use of the Information;</i></li> <li>• <i>ensure that you do not mislead others or misrepresent the Information or its source;</i></li> <li>• <i>ensure that your use of the Information does not breach the Data Protection Act 1998 or the Privacy and Electronic Communications (EC Directive) Regulations 2003.</i></li> </ul> <p><i>These are important conditions of this licence and if you fail to comply with them the rights granted to you under this licence, or any similar licence</i></p>

<sup>19</sup> New Zealand Government States Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1

<sup>20</sup> New Zealand Government State Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1

Key Policy Issue	Sample Statements/Scope of Coverage
<p>Respective rights and options for use by all education stakeholders:</p> <ul style="list-style-type: none"> <li>• National Department of Education</li> <li>• Provincial/State Department of Education</li> <li>• Education councils</li> <li>• Educational institutions</li> <li>• Quality Assurance and Accreditation bodies</li> <li>• Teachers/staff</li> <li>• Sub-contractors</li> <li>• Learners/students</li> </ul>	<p><i>granted by the Licensor, will end automatically.</i><sup>21</sup></p> <ul style="list-style-type: none"> <li>• Educators: <i>The Author retains ownership of the copyright in the course, and all rights not expressly granted in this agreement, including the nonexclusive right to reproduce, distribute, adapt, perform and display the course material in any medium. These retained rights allow the Author to make and distribute copies in the course of teaching research, to post the course material on personal or institutional Web sites and in other open-access digital repositories, and to make derivative works from the course material.</i></li> <li>• Educational institutions: <i>Materials prepared by lecturers for students are subject to the provisions of the 'Policy in respect of exploitation of intellectual property</i></li> </ul>
<p>Licensing conditions for material produced.</p>	<ul style="list-style-type: none"> <li>• Recommend the use of licence terms that permit unrestricted sharing, with use of more restrictive license terms only under special conditions.</li> <li>• Indicate conditions of use of different licences.</li> <li>• Individual resources should be clearly labelled with the required usage licence.</li> <li>• Licences should be easily identified through the use of prominently displayed icons.</li> <li>• The policy may note where in the resource the licensing detail is indicated: <ul style="list-style-type: none"> <li>– Specify how the material is to be cited when other people reuse or adapt it.</li> <li>– Attribute content objects included in the OER that have been created by someone other than authors.</li> <li>– Ensure that permission has been obtained for third party copyrighted material used in the material.</li> </ul> </li> </ul> <p><i>All published resources should contain the following information with the downloadable version:</i></p> <ul style="list-style-type: none"> <li>• <i>The Creative Commons license with hyperlink to the license</i></li> <li>• <i>The name of the Copyright Holder and Year of Publication</i></li> <li>• <i>The name of author(s) (N.B., this may be different from the copyright holder)</i></li> <li>• <i>Branding of the institution/s, associates, funders etc.</i></li> <li>• <i>Acknowledgements of those who contributed (media specialists, voiceovers, collaborators, etc.)</i></li> <li>• <i>List of all third party copyright clearance obtained (title of resource with copyright holder)</i></li> <li>• <i>How the OER is to be cited.</i></li> <li>• <i>General contact person – an email address for managing inquires about the OER.</i><sup>22</sup></li> </ul> <p><i>To facilitate sharing of its materials, Saide will work to ensure that every document released for distribution via the Internet (both through the Saide and</i></p>

<sup>21</sup> Open Government License for Public Sector Information. Retrieved from <http://www.nationalarchives.gov.uk/doc/open-government-licence>

<sup>22</sup> Teacher Education OER Publishing Protocol

Key Policy Issue	Sample Statements/Scope of Coverage
	<p><i>OER Africa web platforms) will:</i></p> <ul style="list-style-type: none"> <li>• <i>Indicate the licensing conditions of the resources clearly on the first page of the document and in the footer on every page.</i></li> <li>• <i>Ensure that the resource is appropriately branded on every page to attribute the origin of the document correctly. In many instances, this will simply require incorporation of a Saide logo, but more complex arrangements may be required in the event of resources that have been co-produced with other parties.<sup>23</sup></i></li> </ul> <p><i>Any reproduction of the textbook (including, but not limited to, its publication, posting or excerption in print or on the Internet) is required to give attribution to the author and institution in the form: 'Author, institution, year'</i></p>

## Curriculum Design/Materials Development

Educational institutions need to invest in materials development and curriculum design on a regular basis for the improvement of quality of teaching and learning. It has been argued that the most cost-effective way to invest in materials design and development is to incorporate effective adaptation and use of OER, because it eliminates unnecessary duplication of effort by building on what already exists elsewhere, takes advantage of pooled alternative resources to meet accessibility obligations, removes costs of copyright negotiation and clearance, and - over time - can engage open communities of practice in ongoing quality improvement and quality assurance. Indicating commitment to the use, adaptation and creation of appropriate OER, in support of ongoing curriculum and materials review cycles, would help to ensure that teaching and learning is seen as a continuing process of renewal. In addition to content, publishing all formal assessments as OER would allow for a repository of tests, problems sets, assignments, essay questions and examinations to be available under open licenses.

The increasing demand for access to quality education, combined with rising education enrolments, also calls for more educational resources, particularly textbooks. However, textbook prices are soaring along with the rising cost of education resulting in the overall price of education to increase significantly. Publishers have been criticized for producing books that are too long (educators use only a small portion of the text), for bundling (forcing students to buy not just the book but also other resources that inflate prices and may make the book harder to resell), and for publishing revisions more frequently than needed. As textbook costs rise, there is a simultaneous move toward digital textbooks, due to the increasing availability of ICT. The potential of electronic textbooks, combined with the potential of OER, is regarded as an option to mitigate the rising cost of textbooks, with several organizations and institutions making electronic textbooks available for free.

The key issues that OER policy may wish to tackle in this regard are:

Key Policy Issue	Sample Statements/Scope of Coverage
Commitment to invest in creating high quality learning resources.	<ul style="list-style-type: none"> <li>• Identify who are the creators of learning resources in the country – for example, educational institutions, commercial publishers, and/or non-governmental organizations (NGOs).</li> <li>• Indicate support to be provided to education institutions (individually or</li> </ul>

<sup>23</sup> SAIDE OER Policy

Key Policy Issue	Sample Statements/Scope of Coverage
	collectively) and organizations to invest resources in the production and sharing of high quality educational resources and ongoing improvement and updating of curricula and teaching materials.
Encourage the use and adaptation of existing relevant openly licensed materials.	<ul style="list-style-type: none"> <li>• This may for example, include encouraging the development of a recognition and reward scheme for collaboration and sharing in the creation of new materials, as well as the adaptation of existing materials.</li> </ul> <p><i>OER produced by faculty members should be seen as intellectual products, which count towards career advancement. It is recommended that three OER materials be considered equivalent to a peer-reviewed publication. However this equivalence ratio should be guided by the level of complexity of the material produced. In order not to kill conventional research resulting in peer-reviewed publication, a faculty member should not be promoted solely on the production of OER material in lieu of peer-reviewed publications. The appointment letters of faculty members should indicate the production of OER as one of the core activities of faculty.<sup>24</sup></i></p>
Encourage institutions and educators to pool and share resources.	<ul style="list-style-type: none"> <li>• States (as well as colleges, universities, districts, and schools) should ensure that the commitment to sharing and disseminating digital educational resources is explicit.</li> <li>• Encourage institutions to include materials development in job descriptions, include these activities in rewards, incentives and promotions policies, and/or appointment of people/creation of units dedicated to these tasks. (This can also form part of the human resources policy noted below).</li> <li>• While different institutions may wish to incentivize these activities in different ways, according to their specific mission and vision, all would benefit from ensuring that their policies provide structural support to investment of time by educators in these activities, as part of a planned process to improve the quality of teaching and learning.</li> </ul>
Advocacy and training in OER	<ul style="list-style-type: none"> <li>• Policy needs to ensure that all education stakeholders understand issues surrounding IPR, as well as how these are being challenged and re-shaped by the rapid digitization and online sharing of information and resources.</li> <li>• This could include advocacy work with education institutions and other stakeholders around OER to ensure that OER are not viewed as inferior and are used by when appropriate.</li> <li>• It could also include development and sharing of case studies of good practice and relevant examples of use to help to give practical expression to the advocacy work.</li> <li>• This will cover training of teaching staff and course writers in open licenses (such as CC framework), copyright issues and plagiarism. This will serve to deepen knowledge of the options available to manage IP effectively.</li> <li>• Consider whether OER development is included in teacher training.</li> </ul>
Stipulate how learning resources will be selected for development, developed and then approved for use and subsequently for release into the OER community.	<p><i>Material will first be sourced from open content. If this is not available, the following avenues will be explored:</i></p> <ul style="list-style-type: none"> <li>• <i>Translating existing material into priority indigenous languages;</i></li> <li>• <i>Procuring the copyright to high quality existing materials so that resources can then be freely distributed without generating additional cost; and</i></li> <li>• <i>Building structured, long-term partnerships with commercial organization and NGOs that currently produce free materials, and supporting their efforts to raise funds to sustain their business models</i></li> </ul>

<sup>24</sup> University of Ghana draft OER policy

Key Policy Issue	Sample Statements/Scope of Coverage
	<p><i>The development and/or selection of teaching and learning materials for any given module is the responsibility of the institution and department(s) presenting the module.</i></p> <p><i>When the copyright work or non-copyright material is ready for release, the agency should:</i></p> <p><i>(a) consider the various channels through which it could be released (whether governmental and/or third party operated), selecting those which are most appropriate in all the circumstances (with announcements on its own website and, for datasets, on data.govt.nz, as a minimum);</i></p> <p><i>(b) consider whether to use press releases and/or social media to publicise the release and maximise uptake; and</i></p> <p><i>(c) release!<sup>25</sup></i></p>
<p>Consider the establishment of a national repository for OER</p>	<ul style="list-style-type: none"> <li>• Consider where and how draft and final versions of learning resources, and their constituent elements are stored. This may require the creation of a repository of educational works to promote dissemination and shared use of resources.</li> </ul> <p><i>Wikiwijs will be a central platform for teachers in the Netherlands, from primary to university education, where they can find, use and adapt Open Educational Resources (OER). Here, teachers can develop their own educational resources, store them and share them with colleagues. They will also be able to combine open educational resources with 'closed' educational resources (no free access). It is a tool which offers teachers greater freedom in using educational resources as they see fit and which will contribute to enhancing the status and professionalism of teachers.<sup>26</sup></i></p> <p><i>Peer reviewed journal articles and other research outputs resulting in whole or in part from publicly-funded research should be deposited in an Open Access repository and made publicly discoverable, accessible and re-usable as soon as possible and on an on-going basis.<sup>27</sup></i></p> <ul style="list-style-type: none"> <li>• While some institutions may prefer to host their own content on their institutional servers, it is likely to be more cost-effective to establish a shared national repository of OER that can be accessed by all education providers and connect to global networks. Thus, it is strongly recommended that a national repository be established.</li> <li>• The repository can serve as a clearing house or digital library for content as a way of promoting learning materials that are directly linked to the curriculum of a country.</li> <li>• The policy can set out what learning and teaching resources can be deposited (as well as the required format) into a national repository.</li> <li>• This can include content produced as well as formal assessments</li> </ul>

<sup>25</sup> New Zealand Government State Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1, p.44

<sup>26</sup> Wikiwijs Program Plan 2011 – 2013 Version 1.0 (2011). Open educational resources via Wikiwijs in a sustainable perspective

<sup>27</sup> National Principles for Open Access Policy Statement Ireland. Retrieved from <http://www.ndlr.ie/artefact/file/download.php?file=21093&view=384>

## Human Resource Policy

Support and recognition for OER-related initiatives, projects, and activities is necessary in national and institutional policies as this will encourage educators and learners to actively participate in the OER movement. Educators increasingly need to understand the complex issues surrounding knowledge networks and how they may be changing the ways in which content is both created and shared. Accordingly, it is becoming increasingly important to ensure that educators and institutions are aware of these issues and how it can be of benefit. Creating and using OER should be considered integral to education and should be supported and rewarded accordingly. This requires a policy shift to create incentives for institutions and educators to contribute openly-licensed courses and materials.

Thus, human resource policy needs to foster and reward a sharing culture and encouraging movement towards OER publishing. Key policy issues would include the following (note that some of these may be more appropriate at the institutional policy level, especially at higher education level, although this would differ in different country contexts, depending on the autonomy of institutions):

Key Policy Issue	Sample Statements/Scope of Coverage
Consider training and support to educators in developing and using OER	<ul style="list-style-type: none"> <li>• Educators need to be provided the necessary resources (harnessing all media as appropriate), tools, and information for teaching to create effective learning opportunities for learners to successfully meet the requirements of the Curriculum;</li> <li>• Effective communities of practice amongst educators need to be created and sustained to enable educators to benefit from exposure to quality teaching and learning methodologies, professional dialogue with peers, and ongoing open sharing of information, ideas, and resources.</li> <li>• Create and encourage training to ensure that staff members understand copyright issues and the different ways in which they can harness openly licensed resources.</li> <li>• Invest in ongoing awareness-raising, capacity-building, and networking/sharing activities to develop the full range of competences required to facilitate more effective use of OER. These activities could aim to encourage a shared vision for open educational practices, which would ideally be aligned to government’s educational vision and mission.</li> </ul>
Clarity on IPR and copyright on works created during the course of employment or study and how these may be shared with others.	<ul style="list-style-type: none"> <li>• Cover full time, part time and contract staff as well as students any and all of whom might become involved in a team-based curriculum and materials development process.</li> </ul>
Consider how to incorporate the development of OER in job descriptions.	<ul style="list-style-type: none"> <li>• This can cover whether the creation of certain kinds of work, such as learning resources constitutes part of the job description (an employment contracts) of educators, and the implications for development, performance management, remuneration and promotion purposes</li> <li>• It can stipulate that a portion of educators’ time be invested in ongoing curriculum design, creation of effective teaching and learning environments within courses and programmes, and development of high-quality teaching and learning materials.</li> </ul>
Incentive structures to reward collaborative activity and encourage production of new	<ul style="list-style-type: none"> <li>• Encourage institutional policies to reward both the creation of new materials and the adaptation of existing materials (with the former more highly rewarded).</li> </ul>

Key Policy Issue	Sample Statements/Scope of Coverage
materials.	<i>Our goal is the creation of incentives and support so our faculty, staff and others we attract will participate as fully as possible in making available a new generation of lower cost, high-quality learning materials derived from existing public domain resources as substitutes for old-fashioned textbooks.<sup>28</sup></i>
Ensure recognition of OER	<i>OER production and publishing would be recognized and given similar credit (actual weighting to be decided by individual University Appointments and Promotions Committees) as peer-reviewed publications. Universities would also allow time allocation for faculty to produce OER materials. Staff involved in OER production would be eligible to receive OER grants (when available).<sup>29</sup></i>

## Sourcing (procuring) content

The OER policy may also stipulate the way in which content procured from third parties are used. This may require an evaluation of agreements with contractors to ensure that materials procured can be released as OER. Note that in-principle decisions to exclude commercial content from consideration in teaching and learning environments are likely to be inappropriate, as it ignores the reality that there are high quality educational materials available for purchase and that, in certain circumstances, their use may be more affordable than attempts to produce that content openly or adapt existing open content. Thus, the most cost-effective way to develop and procure resources for use in teaching and learning is to explore all available options, rather than excluding some on principle.

The policy may therefore stipulate the following:

Key Policy Issue	Sample Statements/Scope of Coverage
Stipulate what agreement contracts with external materials developers would specify regarding materials produced.	<ul style="list-style-type: none"> <li>The policy should clearly spell out their rights in terms of the materials that third parties produce under contract, including the possibility of subsequent use and reuse by third parties</li> <li>It may stipulate the avoidance of third party, copyrighted material embedded in the material that would otherwise limit its ability to be shared.</li> </ul> <p><i>Payment for work done all materials would become copyright of the paying institution and released under a Creative Commons License.</i></p>
Stipulate the license under which newly commissioned materials will be released.	<i>Any new materials commissioned for development will be licensed under a Creative Commons licence so that they can be freely copied and adapted, but with proper recognition, by the public.</i>
Undertake a process of reviewing content to verify IP before releasing procured content	<p><i>It is recommended that State Services agencies follow the review and release process set out below before releasing copyright works or non-copyright material for re-use, with assistance where required from their legal teams. The process consists of seven main stages:</i></p> <ul style="list-style-type: none"> <li><i>copyright-related rights evaluation;</i></li> <li><i>evaluation of restrictions;</i></li> </ul>

<sup>28</sup> Hal Plotkin's Proposed Policy on Public Domain-Based Learning Materials Draft #1 March 2004. Retrieved from <http://www.halplotkin.com/PublicDomainPolicyDraft1.htm>

<sup>29</sup> Adapted from Kwame Nkrumah University Of Science And Technology (KNUST) (2011). Policy for Development and Use of Open Educational Resources (OER). Kumasi: Ghana

Key Policy Issue	Sample Statements/Scope of Coverage
	<ul style="list-style-type: none"> <li>• <i>re-use rights selection;</i></li> <li>• <i>application of licence or no known rights statement;</i></li> <li>• <i>moral rights check;</i></li> <li>• <i>format selection; and</i></li> <li>• <i>release.</i><sup>30</sup></li> </ul>

## Costs

There are many arguments advocating for governments, school boards, colleges, and universities to make open education a high priority. These have centred on arguments that taxpayer-funded educational resources should be OER. Additionally, while most higher education funding systems leave institutions to make decisions about where and how to invest their time and money, many institutions struggle - either because of limited finances, competing priorities, overloaded academics, or the relatively higher prestige given to research output - to invest the necessary financial and human resources in ongoing improvement of the educational programmes that they offer to their students. The OER policy may thus also wish to ensure that a portion of public spending in education is invested in OER.

Key policy issues would include the following (note that some of these may be more appropriate at the institutional policy level, especially at higher education level, although this would vary in different country contexts, depending on the autonomy of institutions):

Key Policy Issue	Sample Statements/Scope of Coverage
The current extent to which learning materials are produced or paid for by public funds, directly or indirectly	<ul style="list-style-type: none"> <li>• Note the portion of public spending invested in ongoing curriculum design and creation of effective teaching and learning environments within courses and programmes</li> </ul>
How to encourage investment in designing and developing programmes, courses, and educational resources.	<p><i>To encourage investment in the design and development of materials:</i></p> <ul style="list-style-type: none"> <li>• <i>A specific fund will be set aside for this purpose</i></li> <li>• <i>Funding and other relevant incentives for collaborative engagements by institutional or inter-institutional teams to develop curricula and materials will be provided.</i></li> </ul> <ul style="list-style-type: none"> <li>• National policies might be able to take a position on how institutions should reward staff for their time – see the section on Human Resource policy for more detail.</li> </ul>
Costs of investing in programme, course, and materials development/acquisition.	<p>The policy may note what these costs would involve, for example it could include the following:</p> <ul style="list-style-type: none"> <li>• Wages for the time of people in developing curricula and materials,</li> <li>• Adapting existing OER,</li> <li>• Dealing with copyright licensing (if material is not openly licensed)</li> <li>• ICT infrastructure (for authoring and content-sharing purposes)</li> <li>• Bandwidth expenses.</li> <li>• Costs of running workshops and meetings when content development teams</li> </ul>

<sup>30</sup> New Zealand Government State Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1, p.18

Key Policy Issue	Sample Statements/Scope of Coverage
	meet
Stipulate how funding will be allocated to OER	<ul style="list-style-type: none"> <li>• Include costs associated with facilitating the electronic management, organization and online sharing of OER</li> <li>• Consider how various departments and educational institutions can apportion budgets to OER.</li> </ul> <p><i>Colleges, faculties and departments will be required to make budgetary allocations for the development of OER within their units. They will also be required to explore external sources of funding including grants and collaborations to roll out OER as a means of addressing existing curriculum needs.</i><sup>31</sup></p>
Budgets for purchasing educational materials	<ul style="list-style-type: none"> <li>• This should allow for procurement of materials across a wide range of media types and formats, so that there is a balanced mix between digital and printed resources particularly in contexts of limited bandwidth and connectivity</li> </ul>

## ICT Infrastructure and Connectivity

While the pedagogical potential of OER is deeply tied to the concept of resource-based learning and its origins in well-designed distance education course materials, it would simply not have been conceivable before the ICT explosion. This is because the network of connected digital devices that is the Internet has made it possible to share information globally on a scale and at speeds that were largely unimaginable before the 1990s. ICT is enabling exponential increases in the transfer of data through increasingly globalized communication systems, and connecting growing numbers of people through those networks. As a consequence of growing connectedness and the proliferation of Web 2.0 technologies, there has been an explosion in collective sharing and generation of knowledge. Collective intelligence and mass participation of amateurs in previously specialized disciplinary areas are extending the boundaries of scholarship, while dynamic knowledge creation and social computing tools and processes are becoming more widespread and accepted. This opens the opportunity to create and share a greater diversity of learning resources, thereby accommodating a greater diversity of learner needs.

The ease with which digital content can be created, shared online and copied by others, however, also introduced problems regarding copyright and intellectual property protection – problems that have affected, and continue to transform, most industries based on protection of intellectual capital as an economic model, including education and educational publishing – and which therefore create a need to formulate policy positions on many of the issues covered above. From this perspective, access to ICT infrastructure and connectivity is a central requirement to harness OER effectively in the medium- to long-term. An ICT focus in an OER policy would thus need to tackle issues regarding access to and use of appropriate software, hardware, the internet and technical support, as well as provision for version control and backup of any storage systems for educational resources.

Key policy issues might include:

Key Policy Issue	Sample Statements/Scope of Coverage
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<sup>31</sup> Kwame Nkrumah University Of Science And Technology (KNUST) (2011). Policy for Development and Use of Open Educational Resources (OER). Kumasi: Ghana

Key Policy Issue	Sample Statements/Scope of Coverage
Reference to the country's ICT in Education policies – and possibly broader National ICT Strategies – and how this policy fits in with those strategies.	<ul style="list-style-type: none"> <li>• Ensure that national ICT/connectivity strategies make provision for ongoing increases in connectivity and educator/student access to ICT within education systems.</li> <li>• Consider how regulation of telecommunications working to ensure affordable broadband connectivity for education systems.</li> </ul>
Provision of the necessary infrastructural support	<ul style="list-style-type: none"> <li>• Ensure that teaching staff have access to the necessary ICT infrastructure and connectivity, as well the requisite technical support to access the Internet and develop or adapt educational materials.</li> </ul> <p><i>Affordable, broadband connectivity will enable all educational institutions (schools, universities, and government departments) to connect as many ICT devices as they require to the Internet, ensuring that any online activities (managerial, administrative, or educational) being undertaken by the educational institution can be done reliably and quickly.</i></p> <p><i>Available ICT applications provide educational institutions a clear and compelling rationale to sustain ICT and connectivity investments, as well as to continue investing in developing the capacity of all members of the education community to be able to use these applications effectively. These applications are accessible and affordable to all educational institutions.</i></p> <p><i>All Indonesian learners regularly use a wide variety of electronic and printed media that supports successful completion of their educational careers, enhancing their ability to participate actively in the global information society and knowledge economy, and developing them spiritually, emotionally, socially, and intellectually to be a competitive Indonesian. Printed and electronic media complement each other, both in terms of supporting learning and teaching and in relation to spending on learning support materials.</i></p> <p><i>Universities should encourage a teamwork approach to curriculum and materials development to bring together different kinds of expertise available across the university e.g. disciplinary, pedagogic, design, systems, ICT, etc.<sup>32</sup></i></p>
Mention knowledge management systems and strategies to store, curate, and share educational content	<ul style="list-style-type: none"> <li>• For national repositories to be used effectively, there is a need for the associated infrastructure and services that increase the ability of developers to share (and users to find and use) the digital educational assets that are stored there.</li> <li>• Adopt and support the use of content management and authoring tools (web content editing tools, content management systems), templates, and toolkits that facilitate the creation of adaptable, inclusively designed educational resources.</li> </ul> <p><i>All digital educational resources created with public funds to be deposited in the national repository. The repository will use and support resources with open (preferably, Creative Commons) licences.</i></p>

<sup>32</sup> Adapted from Kwame Nkrumah University Of Science And Technology (KNUST) (2011). Policy for Development and Use of Open Educational Resources (OER). Kumasi: Ghana

## File Formats

OER may be distributed in a variety of formats, including electronically online, removable media (e.g. CD/DVD, or USB), and paper hard copies. In order to maximize its reach and visibility, OER is often distributed online which introduces considerations such as managing file size and selecting appropriate descriptive data (commonly referred to as metadata). File size and structure is an especially important consideration as small manageable files can be more easily downloaded in bandwidth-constrained areas.

Key Policy Issue	Sample Statements/Scope of Coverage
The national OER policy may wish to indicate a general rule regarding formats	<p><i>49 When licensing copyright works and releasing non-copyright material for re-use, agencies should:</i></p> <p><i>(a) consider the formats in which they ought to be released, taking into account, where relevant, the wishes of those who will or are likely to re-use the works or material;</i></p> <p><i>(b) release them in the formats they know or believe are best suited for interoperability and re-use and are searchable and indexable by search engines; and</i></p> <p><i>(c) in the case of datasets, add their details into data.govt.nz.</i></p> <p><i>50 When releasing works or material in proprietary formats, agencies should also release the works or material in open, non-proprietary formats (the Open Format Principle).<sup>33</sup></i></p>
The policy may wish to provide stipulations on the formats for materials created and distributed	<ul style="list-style-type: none"> <li>• To facilitate adaptation, the policy can stipulate use of formats for text, images, video and audio that are commonly used and editable, or that proprietary formats be avoided if possible.</li> <li>• It may also indicate what needs to be considered when choosing a format, such as the following issues: <ul style="list-style-type: none"> <li>– purpose of material (adaptation or mainly downloading and re-use).</li> <li>– availability of formats and ability to accommodate a diversity of technical platforms (readily available and used among target audience).</li> <li>– cost (users should not be required to purchase software to use resources).</li> <li>– File size (particularly in low bandwidth situations, files larger than 20 MB take a long time to download, and potential users may be put off by the effort required).</li> </ul> </li> <li>• Should users wish to publish non-editable compressed formats (such as PDF) for convenience of file sizes or embedding in an HTML, the policy may advise distributing a second copy in an editable or easily adaptable format. The policy can therefore stipulate that the materials be made available in multiple formats, or that wikis be used to allow its users to add, modify, or delete its content via a web browser. It is also a good idea to present the material in different formats, so that users choose how they want to engage with the resource.</li> <li>• The policy may also wish to stipulate issues such as ‘chunking’ OER into smaller sections, and preparing for separate uploading. Availability of material in smaller discrete units can also facilitate adaptation – provided that there is a clear sense of how the parts fit into the whole.</li> <li>• One option for large files is to include high resolution and low resolution</li> </ul>

<sup>33</sup> New Zealand Government State Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1

Key Policy Issue	Sample Statements/Scope of Coverage
	<p>versions on the website, with an explanation that for quick view, the low resolution version will be adequate, but for quality, the user will need to find a way to download the much larger file.</p> <ul style="list-style-type: none"> <li>Another option for large files is to include scripts of video and audio files as PDFs, so that, if the bandwidth is low, there is another form of access to the material. In all cases where smaller ‘chunks’ of longer resources are used, care needs to be taken to label the chunk appropriately.</li> </ul> <p><i>Before releasing the relevant copyright work or non-copyright material, the agency should consider the formats in which it ought to be released.</i></p> <p><i>Where agency knows users’ format preferences</i></p> <p><i>161 If the agency already knows the formats in which users of the work or material would or would probably like to see it provided, the agency should – to the greatest extent practicable – prepare the work or material for release in those formats.</i></p> <p><i>Where agency does not know users’ format preferences</i></p> <p><i>162 If the agency does not know the formats in which users of the work or material would or would probably like to see it provided, it should either:</i></p> <p><i>(a) seek public feedback on the desired format(s) before release; or</i></p> <p><i>(b) prepare the material for release in one or more standards-compliant formats with a view to asking recipients, after release, whether they are satisfied with those format(s).<sup>34</sup></i></p>

## Quality Assurance Policy Guidelines

The growth of OER has a significant effect on the way in which education institutions (particularly higher education institutions) carry out programme and course design, as well as the use that teaching staff make of learning resources. However, a key challenge with OER is to ensure that the resulting products are educationally effective and of a high standard. To ensure that quality is considered when resources are prepared and uploaded as OER, different people within a design and development process need to take responsibility for different aspects of quality. For example, in a University, approval of courses is the responsibility of Senate, but the individual academic department heads may have the authority to approve the materials to be developed or adapted. There may be a team approach to planning and undertaking the materials development process, with a project leader. But there are also a range of administrative tasks which may be undertaken by library or IT people within the institution.

Additionally, there are many agencies around the world that take responsibility for the external quality assurance (QA) of education, including accreditation of education institutions and/or their programmes. These bodies play an essential role, particularly in education, because they establish parameters of good practice and ensure that universities adhere to these practices. They also play a critical role in seeking to prevent poor quality educational practices from developing, as well as to protect students from exploitation by institutions. Given this, the understanding of what constitutes quality provision by quality assurance agencies and any quality criteria emanating from such an understanding at national level have a profound impact on the shape and nature of education practice in a particular country and across the world. Serving a different but related purpose are academic recognition bodies which are

<sup>34</sup> New Zealand Government State Services Commission. (2010). New Zealand Government Open Access and Licensing framework (NZGOAL). Version 1, p.46

responsible for assessing degrees for academic and professional mobility. In some countries, these activities are undertaken by one body, while, in others, separate entities are established.

Given the role of quality assurance bodies, they will sometimes consider the quality of learning materials directly in programme accreditation or indirectly through review of the quality management systems that an institution has in place to ensure that quality learning materials are used appropriately in their programmes. In conducting these quality assurance activities, it is essential that the agency is aware of the wide range of learning materials available, as well as the purpose for which, and the context in which, the learning materials are to be used.

Effective use of OER assumes the ability of teaching staff to customize whatever resources are available in order to contextualize them for particular courses. Merely adopting what is freely available without necessary intellectual and pedagogical adaptation is unlikely to add much value to educational programmes in education institutions, neither does it effectively support continuing improvement of OER. To this end, quality assurance and academic recognition agencies can play an important role in encouraging or recognizing appropriate adaptation of OER in order to ensure that they are fit for purpose. In addition, quality assurance bodies could encourage institutions to make available their best learning materials as a means to promote quality within the education system.

The key question here is what QA and accreditation processes should be introduced to safeguard quality but encourage constructive change through the adoption of OER? Thus, an OER QA policy may wish to provide information on the following:

Key Policy Issue	Sample Statements/Scope of Coverage
Processes currently in place to assure the quality of learning materials used in education	<ul style="list-style-type: none"> <li>Mention could be made of relevant quality assurance policies at the national level or those specific to higher education</li> </ul>
Role of QA and Academic recognition agencies	<ul style="list-style-type: none"> <li>Note what the role of QA and academic recognition agencies (if applicable) would be in encouraging or recognizing appropriate adaptation of OER in order to ensure that they are fit for purpose</li> <li>Detail how quality assurance, accreditation, and recognition agencies tackle IPR and copyright.</li> </ul>
The 'status' of OER in QA processes	<ul style="list-style-type: none"> <li>Indicate whether accreditation and adoption processes would give preference to OER.</li> <li>Mention whether quality processes take into account the wide range of types of learning materials and the different purposes and/or contexts in which they are used and are they also being applied to OER.</li> </ul> <p><i>Academic recognition bodies will take the same criterion into account when assessing the value of learning that has taken place through courses using OER.</i></p> <p><i>Freely available digital content will be evaluated in the same way that is done for physical texts</i></p>
Evaluation of teaching and learning material	<ul style="list-style-type: none"> <li>The policy may stipulate that QA agencies may wish to work with institutions to develop criteria for the assessment of educational resources and the purposes for which they are used in educational programmes, and to assist stakeholders to develop their abilities to conduct this assessment</li> <li>It can also stipulate that teaching and learning materials be evaluated as part of institutions' QA processes.</li> </ul>

Key Policy Issue	Sample Statements/Scope of Coverage
	<p><i>Teaching and learning materials should be evaluated as part of various existing internal quality management processes, as indicated in pertinent quality management policy:</i></p> <p><i>a. during the approval process for new modules;</i></p> <p><i>b. during routine evaluation of existing modules and/or programmes;</i></p> <p><i>c. as part of the evaluation of departments.</i></p> <p><i>Teaching, and by implication the nature, extent and use of teaching and learning materials, is an integral component of the annual performance appraisal of lecturers.</i></p>
Capacity Building of personnel in QA agencies and accreditation bodies	<ul style="list-style-type: none"> <li>• Make provision for ensuring that all personnel involved in quality assurance, accreditation, and academic recognition processes in education are familiar and up to date with the issues surrounding IPR and copyright and understand the range of licensing options available for educational materials.</li> <li>• The policy may wish to stipulate that these personnel keep abreast of how the emergence of the Internet, mushrooming of access to freely available online content, ease of sharing digital content, and availability of different licenses under which content can be shared create both opportunities and challenges for education.</li> </ul>

## Skills/Knowledge for policy advisors

Whilst OER offers both opportunities and challenges, they also carry with them a requirement for all people in decision-making positions to be aware of the changes that are taking place and what appropriate responses might be. Consequently, it is advisable for governments to invest in awareness-raising activities amongst government officials, institutional decision-makers, academics, and other key stakeholders to explore the emerging legal, economic, and educational issues and to consider both the possibilities and challenges that they pose.

See Appendix D for a list of skills policy advisors may wish to develop to make most effective use of OER.

## Appendix A: Useful References

- New Zealand: New Zealand Government Open Access and Licensing Framework (NZGoal) <http://www.e.govt.nz/policy/nzgoal>
- Austria – default licensing document: Rahmenbedingungen für Open Government Data Plattformen (Framework for Open Government Data Platforms)
- United States: The Washington Declaration on Intellectual Property and the Public Interest - <http://infojustice.org/washington-declaration>
- [Global list of OER policies - http://wiki.creativecommons.org/OER\\_Policy\\_Registry](http://wiki.creativecommons.org/OER_Policy_Registry)
- Butcher, N. (2011). A Basic Guide to Open Educational Resources (OER). UNESCO and Commonwealth of Learning. <http://www.col.org/resources/publications/Pages/detail.aspx?PID=357>
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- Hoosen, S., and Butcher, N. (2012). Experiences of Developing OER-Amenable Policies. In Glennie, J., Harley, K., Butcher, N., and van Wyk, T. (eds). (2012). Perspectives on Open and Distance Learning: Open Educational Resources and Change in Higher Education: Reflections from Practice. Commonwealth of Learning and UNESCO. <http://www.col.org/resources/publications/Pages/detail.aspx?PID=412>
- OER-forum: <http://lists.esn.org.za/mailman/listinfo/oer-forum>
- WikiEducator, a community intended for the collaborative:
  - planning of education projects linked with the development of [free content](#);
  - development of free content on [Wikieducator](#) for e-learning;
  - work on building open education resources (OERs) on how to create OERs.
  - networking on [funding proposals](#) developed as free content.See [http://wikieducator.org/Main\\_Page](http://wikieducator.org/Main_Page)
- Learning Resource Metadata Initiative, a project aimed at improving education search and discovery via a common framework for tagging and organizing learning resources on the web - <http://wiki.creativecommons.org/LRMI>
- The Creative Commons Add-in for Microsoft Office allows license information to be embedded in Microsoft Word, Excel and Powerpoint documents: [http://wiki.creativecommons.org/Microsoft\\_Office\\_Addin](http://wiki.creativecommons.org/Microsoft_Office_Addin)

# Appendix B: Overview of Open Licences<sup>35</sup>

## Introduction

When considering open licences, it is useful to remember that these are legal tools that make use of existing copyright laws. In particular the exclusive right copyright law that allows a copyright holder to license material with the licence of their choice (Hofman & West, 2008). Liang (2004) notes that

*While phrases such as 'free software' and 'copyleft' conjure up an image of alternatives to copyright, it is relevant to note that it is not a model that abandons copyright. In fact quite the opposite, it relies on copyright law, but uses it creatively to articulate a positive, rather than a negative rights discourse (Liang, 2004, p. 24).*

Open licences for content developed out of the success of the licensing approach being used for open source software. One of the earliest open licences for non-software material was published in 1998 by David Wiley. This licence is no longer used, since newer alternatives are now more appropriate and adaptable to different conditions. In 2000, the Free Software Foundation released its first version of an open licence for non-software materials. Essentially this licence was to allow open-source software developers to produce open manuals and support materials, free of standard copyright restrictions. This licence is known as the GNU FDL (Free Documentation Licence). Although it was used by the popular site Wikipedia until recently (having been replaced by the Creative commons licence), this licence is not widely used within the OER movement partly because it is technically confusing and cumbersome in terms of procedural requirements (Liang, 2004). In some cases, authors also create their own copyright conditions, although this is noted to be legally challenging in many instances and so tends not to be recommended for OER materials (Hofman & West, 2008). Instead the focus has turned to the Creative Commons (CC) set of licence options. Since CC licences are most commonly used, they are described in greater detail in this paper.

A range of other open licences exist such as licences specifically for music and art. Given the focus of this paper on OER this review has not presented details of the full range of open licences. For a comparative analysis of a wide range of open licences please see Liang (2004).

## Creative Commons Licences ([www.creativecommons.org](http://www.creativecommons.org))

The most developed alternative licensing approach is that developed by Larry Lessig of Stanford University in 2001, called Creative Commons (CC). The CC approach provides user-friendly open licences for digital materials and so avoids the automatically applied copyright restrictions. The popularity of CC licences has grown incrementally since its launch in 2002 and by 2006 it was estimated that 45 million web pages had been licensed with a CC licence (Smith & Casserly, 2006). Liang (2004, pg. 78) describes the philosophy of Creative Commons as follows:

*Inspired by the free software movement, the Creative Commons believes that a large vibrant public domain of information and content is a pre-requisite to sustained creativity, and there is a need to proactively enrich this public domain by creating a positive rights discourse. It does this by creating a set of licenses to enable open content and collaboration, as well as acting as a*

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<sup>35</sup> This appendix is taken from : UNESCO/COL OER Guidelines for OER in Higher Education

database of open content. Creative Commons also serves to educate the public about issues of copyright, freedom of speech and expression and the public domain.

The CC licences take account of different copyright laws in different countries or jurisdictions and also allow for different language versions. To make the licensing process as simple as possible for users the creative commons site makes use of a licence generator that suggests the most appropriate licence based on a user’s response to specific questions regarding how their work can be used. In order to facilitate searching for resources licences in a particular way, the CC licence is expressed in three versions:

- *Commons deed*: this is a plain language version of the licence, with supporting icons (see table below);
- *Legal code*: the legal fine print that ensure the licence is recognised in a court of law; and
- *Digital code*: a machine readable translation that allows search engines to identify work by its terms of use (‘About - Creative Commons’; Liang, 2004).

All CC licences include ‘Baseline Rights’: the rights to copy, distribute, display, perform publicly or by digital performance, and to the change the format of the material as a verbatim copy (Hofman & West, 2008, p. 11). In addition, all CC licences assert the author’s right over copyright and the granting of copyright freedoms and require licensees to:

- Obtain permission should they wish to use the resource in a manner that has been restricted;
- Keep the copyright notice intact on all copies of the work;
- Publish the licence with the work or include a link to the licence from any copies of the work;
- Not change the licence terms in anyway;
- Not use technology or other means to restrict other licences’ lawful use of the work (Liang, 2004, p. 82).

### Licence Conditions<sup>36</sup>

Creators choose a set of conditions they wish to apply to their work.

 <b>Attribution</b> by	 <b>Share Alike</b> sa	 <b>Non-Commercial</b> nc	 <b>No Derivative Works</b> nd
You let others copy, distribute, display, and perform your copyrighted work — and derivative works based upon it — but only if they give credit the way you request.	You allow others to distribute derivative works only under a license identical to the licence that governs your work.	You let others copy, distribute, display, and perform your work — and derivative works based upon it — but for non-commercial purposes only.	You let others copy, distribute, display, and perform only verbatim copies of your work, not derivative works based upon it.

### The Licences

The following are the key CC licences:



<sup>36</sup> The following two sections are copied directly from the Creative Commons website – see <http://creativecommons.org/about/licenses>.

This licence lets others distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation. This is the most accommodating of licences offered, in terms of what others can do with your works licensed under Attribution.



#### **Attribution Share Alike**

***cc by-sa***

This licence lets others remix, tweak, and build upon your work even for commercial reasons, as long as they credit you and license their new creations under the identical terms. This licence is often compared to open source software licences. All new works based on yours will carry the same licence, so any derivatives will also allow commercial use.



#### **Attribution No Derivatives**

***cc by-nd***

This licence allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to you.



#### **Attribution Non-Commercial**

***cc by-nc***

This licence lets others remix, tweak, and build upon your work non-commercially, and although their new works must also acknowledge you and be non-commercial, they don't have to license their derivative works on the same terms.



#### **Attribution Non-Commercial Share Alike**

***cc by-nc-sa***

This licence lets others remix, tweak, and build upon your work non-commercially, as long as they credit you and license their new creations under the identical terms. Others can download and redistribute your work just like the by-nc-nd licence, but they can also translate, make remixes, and produce new stories based on your work. All new work based on yours will carry the same licence, so any derivatives will also be non-commercial in nature.



#### **Attribution Non-Commercial No Derivatives**

***cc by-nc-nd***

This licence is the most restrictive of our six main licences, allowing redistribution. This licence is often called the “free advertising” licence because it allows others to download your works and share them with others as long as they mention you and link back to you, but they can't change them in any way or use them commercially.

### **CC Licensing Considerations**

The aspect of CC licensing that is most controversial is the **non-commercial** (NC) clause (Commonwealth of Learning, 2007; Hofman & West, 2008; Rutledge, 2008). There are several reasons for this, including at the most basic level, what ‘non-commercial’ in fact means. Since CC licences are a new phenomenon within copyright law, little previous case history exists to assist in interpreting this clause. The most extreme interpretation of non-commercial is that no money should change hands as part of the process of using of the materials. However, Hofman and West (2008) note that this is not how non-commercial is usually interpreted. For example a transaction is not commonly seen as commercial when it includes refunding for expenses such as travel for example. The transaction becomes commercial when making a profit is the purpose of the transaction. Similarly, writing from the CC perspective, Rutledge notes that:

*CC considers intent to be the primary test of whether a use is non-commercial. If the intent of a particular use is to generate profit, that use is commercial. Under this reasoning, cost recovery per se is not a commercial use (Rutledge, 2008).*

While this approach may seem intuitive, many legal examples could be found demonstrating the complexity of defining 'intent'. The Commonwealth of Learning (COL) Copyright Guidelines specifically address the issue of the NC clause and note that profit and cost recovery, which includes operating costs, should not be confused. This means that an organisation may still charge registration fees, recover materials duplication costs and overhead costs incurred during customisation, duplication and distribution of materials. The COL guidelines continue to note that:

*If an institution declares and/or pays a net profit to shareholders, and a part of the net profit emanates from the sale of learning materials marked with the NC clause, a calculation should be done to determine the amount of net profit that has been earned by that section of the materials that has been marked with the NC clause. This is the critical point when the NC and non-NC materials differ. Organisations that provide materials without the NC clause have accepted that the materials they offer may be used to profit any other organisations' stakeholders (in addition to covering all reproduction costs) (Commonwealth of Learning, 2007, p. 2).*

In working to better understand how the non-commercial clause is applied in different contexts, Creative Commons is conducting research into this issue (Rutledge, 2008). Rutledge ends her commentary by suggesting that readers should also seriously consider whether the non-commercial clause is really necessary.

Rutledge (2008) notes that some believe that any for-profit businesses should not be able to charge course fees or make use of open content, hence the NC restriction. However, this would imply that a private school may not use NC materials (Hofman & West, 2008), nor potentially a for-profit organisation using materials for non-profit work such as a corporate social investment project. Other arguments against using the NC restriction include that it makes the materials incompatible with materials licensed without this restriction (see for example Bissell & Boyle, 2007; Moller, 2005).

While it is understandable that an author who openly releases their materials would not want others to make a profit from them, this can be achieved in other ways. For example, it could be argued that, when materials can be freely accessible via the internet, charging for the materials themselves becomes irrelevant, and to make a profit the individual or company would need to add sufficient additional value beyond what is available for free to make it worthwhile for users to pay. Work released under an attribution-share alike licence requires that any work that is derived from the original work is released under the same licence. Thus, the value added by the for-profit individual/company would itself need to be released freely under an attribution-share alike licence (Moller, 2005).

## **Appendix References**

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# Appendix C: 2012 Paris OER Declaration

## Preamble

The World OER Congress held at UNESCO, Paris on 20-22 June 2012,

*Mindful of relevant international statements including:*

The Universal Declaration of Human Rights (Article 26.1), which states that: ‘Everyone has the right to education’;

The International Covenant on Economic, Social and Cultural Rights (Article 13.1), which recognizes ‘the right of everyone to education’;

The 1971 Berne Convention for the Protection of Literary and Artistic Works and the 1996 WIPO Copyright Treaty;

The Millennium Declaration and the 2000 Dakar Framework for Action, which made global commitments to provide quality basic education for all children, youth and adults;

The 2003 World Summit on the Information Society, Declaration of Principles, committing ‘to build a people-centred, inclusive and development-oriented Information Society where everyone can create, access, utilize and share information and knowledge’;

The 2003 UNESCO Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace;

The 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expression, which states that: ‘Equitable access to a rich and diversified range of cultural expressions from all over the world and access of cultures to the means of expressions and dissemination constitute important elements for enhancing cultural diversity and encouraging mutual understanding’;

The 2006 Convention on the Rights of People with Disabilities (Article 24), which recognises the rights of persons with disabilities to education;

The declarations of the six International Conference on Adult Education (CONFINTEA) Conferences emphasising the fundamental role of Adult Learning and Education.

*Emphasizing* that the term Open Educational Resources (OER) was coined at UNESCO’s 2002 Forum on Open Courseware and designates ‘teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work’;

*Recalling* existing Declarations and Guidelines on Open Educational Resources such as the 2007 Cape Town Open Education Declaration, the 2009 Dakar Declaration on Open Educational Resources and the

2011 Commonwealth of Learning and UNESCO Guidelines on Open Educational Resources in Higher Education;

*Noting* that Open Educational Resources (OER) promote the aims of the international statements quoted above;

Recommends that States, within their capacities and authority:

- a) *Foster awareness and use of OER.* Promote and use OER to widen access to education at all levels, both formal and non-formal, in a perspective of lifelong learning, thus contributing to social inclusion, gender equity and special needs education. Improve both cost-efficiency and quality of teaching and learning outcomes through greater use of OER.
- b) *Facilitate enabling environments for use of Information and Communications Technologies (ICT).* Bridge the digital divide by developing adequate infrastructure, in particular, affordable broadband connectivity, widespread mobile technology and reliable electrical power supply. Improve media and information literacy and encourage the development and use of OER in open standard digital formats.
- c) *Reinforce the development of strategies and policies on OER.* Promote the development of specific policies for the production and use of OER within wider strategies for advancing education.
- d) *Promote the understanding and use of open licensing frameworks.* Facilitate the re-use, revision, remixing and redistribution of educational materials across the world through open licensing, which refers to a range of frameworks that allow different kinds of uses, while respecting the rights of any copyright holder.
- e) *Support capacity building for the sustainable development of quality learning materials.* Support institutions, train and motivate teachers and other personnel to produce and share high-quality, accessible educational resources, taking into account local needs and the full diversity of learners. Promote quality assurance and peer review of OER. Encourage the development of mechanisms for the assessment and certification of learning outcomes achieved through OER.
- f) *Foster strategic alliances for OER.* Take advantage of evolving technology to create opportunities for sharing materials which have been released under an open license in diverse media and ensure sustainability through new strategic partnerships within and among the education, industry, library, media and telecommunications sectors.
- g) *Encourage the development and adaptation of OER in a variety of languages and cultural contexts.* Favour the production and use of OER in local languages and diverse cultural contexts to ensure their relevance and accessibility. Intergovernmental organisations should encourage the sharing of OER across languages and cultures, respecting indigenous knowledge and rights.
- h) *Encourage research on OER.* Foster research on the development, use, evaluation and re-contextualisation of OER as well as on the opportunities and challenges they present, and their impact on the quality and cost-efficiency of teaching and learning in order to strengthen the evidence base for public investment in OER.
- i) *Facilitate finding, retrieving and sharing of OER.* Encourage the development of user-friendly tools to locate and retrieve OER that are specific and relevant to particular needs. Adopt appropriate open standards to ensure interoperability and to facilitate the use of OER in diverse media.

- j) *Encourage the open licensing of educational materials produced with public funds.* Governments/competent authorities can create substantial benefits for their citizens by ensuring that educational materials developed with public funds be made available under open licenses (with any restrictions they deem necessary) in order to maximize the impact of the investment.

2012-06-22

## Appendix D – Skills/Knowledge for Policy Advisors<sup>37</sup>

Policy advisors may wish to develop the following skills in order to make most effective use of OER to improve the quality and cost-effectiveness of OER:

- 1) Expertise in advocacy and promotion of OER as a vehicle for improving the quality of learning and teaching in education (having a good grasp of both conceptual and practical issues, policy implications, and so on). This requires:
  - Passion about the concept of openness, without which any attempts at advocacy are unlikely to succeed;
  - Understanding of the pros and cons of different open licensing arrangements, combined with insight into how most current policy environments constrain use of OER and open licensing of intellectual capital (with a particular focus on the challenges of persuading educational decision-makers in environments where Intellectual Property policies make no provision for open licensing);
  - Clarity on the economic benefits of OER, both in terms of marketing institutions, programmes, and individuals and in cost-effectiveness of materials production;
  - Sound knowledge of practical examples of use of OER to use to illustrate key points;
  - Up-to-date knowledge of the arguments for and against use of OER.
- 2) Legal expertise to be able to:
  - Advise people on licensing of materials;
  - Review current copyright and intellectual property rights (IPR) regimes;
  - Develop and adapt privacy, copyright, and IPR policies;
  - Determine requirements for copyright clearance and privacy to release materials under Creative Commons licences;
  - Negotiate rights to use materials under Creative Commons licences;
  - Reflect copyright and disclaimer statements accurately in materials of different kinds and multiple media.
- 3) Expertise in developing and explaining business models that justify, to institutions, individual educators, and other creators of educational content (including publishers), the use of open licensing and that illustrate the benefits.
- 4) Programme, course, and materials design and development expertise, with a particular focus on helping educators to harness the full potential of resource-based learning in their programmes and courses. This requires a thorough understanding of education (pedagogy; being able to differentiate among open, distance, electronic and blended learning – and their respective merits, etc), as well as the context of education, tailored to the specific sector in which work is taking place. In addition, it requires skills in:
  - Conducting educational needs assessments;
  - Managing curriculum development processes;
  - Effective identification of target audiences;
  - Definition of effective and relevant learning outcomes;
  - Identification of relevant content areas for programmes, courses, and modules;
  - Selection of appropriate combinations of teaching and learning strategies to achieve identified learning outcomes;

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<sup>37</sup> This appendix is taken from : UNESCO/COL OER Guidelines for OER in Higher Education

- Financial planning to ensure affordability and long-term sustainability of teaching and learning strategies selected;
  - Developing effective and engaging teaching and learning materials;
  - Integrating meaningful learner support into materials during design;
  - Designing appropriate effective assessment strategies;
  - Applying the most appropriate media and technologies to support learning outcomes;
  - Using media and technologies to support educational delivery, interaction, and learner support;
  - Sourcing OER, including a knowledge of the strengths and features of the main repositories, specialized repositories, and OER search engines;
  - Adapting and integrating OER coherently into contextualized programme and course curricula;
  - Negotiating with external individuals /organizations to issue or re-issue resources under open licences;
  - Re-versioning existing resources using optical character recognition where they do not exist in digital form;
  - Implementing the necessary processes for producing print-on-demand texts.
- 5) Technical expertise. This set of skills is tightly connected to the skills of materials design and development. Increasingly, resource-based learning strategies are harnessing a wide range of media and deployed in e-learning environments, facilitated by the ready availability of digitized, openly licensed educational content. This requires skills in:
- Advising institutions on the pros and cons of establishing their own repositories, as well as advice on other possible ways of sharing their OER;
  - Creating stable, operational Virtual Learning Environments (VLEs) and content repositories;
  - Supporting educators to develop courses within already operational or newly deployed VLEs;
  - Developing computer-based multimedia materials (including video and audio materials).
- 6) Expertise in managing networks / consortia of people and institutions to work cooperatively on various teaching and learning improvement projects (including an ability to adapt to challenging environments – for example, power outages, physical discomfort, difficult personalities, institutional politics – and remain focused on the task at hand).
- 7) Monitoring and evaluation expertise to design and conduct formative evaluation processes, as well as longer-term summative evaluation and/or impact assessment activities that determine the extent to which use of open licensing has led to improvements in quality of teaching and learning, greater productivity, enhanced cost-effectiveness, and so on.
- 8) Expertise in curating and sharing OER effectively. This includes:
- Technical skills to develop and maintain web platforms to host OER online, as well as to share the content and meta-data with other web platforms;
  - Ability to generate relevant and meaningful meta-data for OER;
  - Knowledge of and the skills to deploy standardized global taxonomies for describing resources in different disciplines and domains;
  - Website design and management skills to create online environments in which content can be easily discovered and downloaded.
- 9) Communication and research skills to be able to share information about OER, in the form of web updates, newsletters, brochures, case studies, research reports, and so on. This will include the full spectrum of skills required for such communication activities, from researching and documenting best practices, core concepts to graphic design and layout expertise.