

## Open Educational Resources

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Open educational resources (OER) are digital resources from organisations or individuals who are willing to share them at little or no cost for teaching, learning or research. Typically they can be easily downloaded, re-used or adapted to suit particular teaching or learning activities, depending on the license. Resources can include complete subjects, instructional modules, textbooks, lecture recordings, assessment items, and software.

The open education approach means that many have peer reviewed either formally or informally by a community of educators. Sharing resources enables teaching staff to provide a wider range of resources to students.

### Accessing OER

OER are usually found in online collections or repositories. Each resource is issued under a license that indicates how it can be used – for example, a Creative Commons licence (<http://creativecommons.org.au/>) or similar license that supports open or nearly open use of the content. Some learning resources can be modified, remixed, and redistributed. In other cases, materials may be used only in their original form.

The OER movement started in 2002 with the [MIT Open Courseware](#) project. Today the development and use of OER repositories are more common in the UK, Canada and the United States than in Australia.

OERs are available from dedicated sites initiated by professional bodies or institutions that provide public access and use, for example:

- [Connexions](#) (International)
- [MERLOT](#) (International)
- [OER Commons](#) (International)
- [Jorum Learning to Share](#) (UK)
- [LabSpace](#) (UK)
- [Carnegie Mellon University](#)
- [MIT Open Courseware](#)
- [OpenCourseWare Consortium](#) (International)
- [LearningSpace – The Open University](#)
- [United Nations University OpenCourseWare](#)

Open resources are available from social networking sites with informal peer review, e.g. Flickr (photos), YouTube (videos), Vimeo (videos), iTunesU. Institutions also make available their videos (e.g. lecture recordings), images (e.g. art collections) and audio recordings (e.g. oral histories) that can be used in teaching and learning but they cannot be modified and redistributed, for example: [Trove](#) (National Library of Australia), [University of Oxford Podcasts](#).

There are also discipline and teaching strategy specific OER collections, for example:

- [Biology Courses](#) (UK)
- [Bio Science Image Lab](#) (UK)
- [UK Centre for BioScience](#) (UK)
- [A Collaborative Digital Library of Life Sciences](#) – (US)
- [Medical Resources](#) (Association of American Medical Colleges)
- [Digital Library for Earth Systems Education](#) (National Science Foundation – US)
- [NEEDS](#) – Engineering education (US)
- [MATTER](#) – Science and Engineering
- [Mathematics for Economics](#) (UK)
- [HumBox](#) – Humanities resources (UK)
- [VADS](#) – Visual arts resources (UK)
- [International Music Score Library Project](#)
- [Teaching Resources for Economics](#) (UK)
- [OpenScout](#) – Management education (Europe)
- [Commonwealth of Learning](#) (Secondary school subjects)
- [Technology-Supported Learning Database](#) (Australia)
- [EnROLE: Encouraging role based online learning environments](#) (Australia)

## How are open resources useful for teaching?

Access to OER means that subject development time and costs may be reduced, potentially providing the educator with more time for students and their learning. While learning does not necessarily improve because resources are available, the quality and practice of using these resources can improve student access to a variety of learning resources supporting different learning activities. OER availability can also provide new ideas to support teaching.

See the examples below:

Learning activities	Examples of OER	Source
<ul style="list-style-type: none"> <li>• Discipline specific content</li> <li>• Instructional modules</li> <li>• Skills development</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Drills for Accounting Basics</a></li> <li>• <a href="#">How to maintain a light microscope</a></li> <li>• <a href="#">Virtual Chemistry Laboratory</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">merlot.org/</a></li> <li>• <a href="#">biologycourses.co.uk/</a></li> <li>• <a href="#">merlot.org/</a></li> </ul>
<ul style="list-style-type: none"> <li>• Case studies</li> <li>• Scenarios</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Teaching Human Rights Online</a></li> <li>• <a href="#">E-Commerce Business Ethics Case Study</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">merlot.org/</a></li> <li>• <a href="#">www.merlot.org/</a></li> </ul>
<ul style="list-style-type: none"> <li>• Role plays</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Globalisation and the Law</a></li> <li>• <a href="#">EnviroRisk</a></li> <li>• <a href="#">Care relationships</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">enrole.uow.edu.au</a></li> <li>• <a href="#">uic.edu/sph/glakes/envirorisk/</a></li> <li>• <a href="#">jorum.ac.uk/</a></li> </ul>
<ul style="list-style-type: none"> <li>• Quizzes/Tests</li> <li>• Exams</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">The Biology Project: Cell Biology</a></li> <li>• <a href="#">Calculus for Engineers</a></li> <li>• <a href="#">Web Anatomy</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">merlot.org/</a></li> <li>• <a href="#">oercommons.org</a></li> <li>• <a href="#">msjensen.cehd.umn.edu/webanatomy/</a></li> </ul>
<ul style="list-style-type: none"> <li>• Learning modules (content, activities and assessments)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Art for Social Spaces</a></li> <li>• <a href="#">Cell Biology</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">vads.ac.uk/learning/designingbritain/html/ass.html</a></li> <li>• <a href="#">jorum.ac.uk/</a></li> </ul>

Teaching staff are continually developing resources to assist their students. Making these resources available as OER is a component of academic scholarship.

## Sources

EDUCAUSE (2010). '7 things you should know about Open Educational Resources'. [Online]. Available from <http://net.educause.edu/ir/library/pdf/ELI7061.pdf>

Open Educational Quality Initiative, OEP Guide. [Online]. Available from <http://www.oer-quality.org/publications/guide/>