

Online Educational Resource Collections: A Ranked Listing of their Strategic Potential for Distance and Open Learning Organizations

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Overview

The purpose of this report is to provide an overview of the educational resources and materials available through various collections and providers that may be of significant strategic value to distance and open learning organizations. This information is provided here in the form of a kind of annotated listing or bibliography, in which each resource is reviewed along the lines of specific criteria tailored to be suitable for many organizations that are providers of open and distance learning. The most important considerations for compiling this listing, as well as the criteria for the inclusion of items in it, are explained in an initial introduction. This report concludes with a general assessment concerning the availability and suitability of high-quality educational resources for typical use by open and distance learning organizations.

Key Consideration: Licensing and Intellectual property

As I showed in a previous article (Friesen, 2009), the vast majority of online educational resource collections demonstrating quality and longevity use creative commons licensing. Even if these collections went online prior to the development of Creative Commons (CC) licenses, they typically have been switching retroactively to this licensing approach. Given the dominance of this type of licensing, the current report begins with a detailed discussion of its probable significance for organizations providing distance and open learning.

Creative Commons and other alternatives to conventional copyright licenses are sometimes associated with the notion that resources so licensed are “freely” available, with little or no restriction. This is often not the case. (The only exception to this question of restrictions is presented by works labeled “public domain,” as is the case with some *Wikimedia* resources, see below.) Creative Commons and other licenses can significantly restrict the use of works, especially for uses and forms of licensing that themselves do not follow Creative Commons restrictions. In addition, once a Creative commons license associated with a particular resource, it is difficult and often impossible to revoke or revise it. Just as data on the Web can end up on hard drives and browser caches around the world, uncontrolled by its creator, so too does the licensing associated with this data.

Creative Commons offers four different categories of licenses for what is often called the “free” use of content. But these licenses specify particular conditions related to its attribution, derivation, distribution and commercial use. One licensing category that has been the source of some controversy places restrictions on the commercial use of creative commons material, implying that the appearance of such material, say, on a Webpage that has commercial advertising or in a journal that requires subscription, would not be permitted (see: Möller, 2007). However, since TRU Open Learning is a not-for-profit organization, it is exempted from this particular restriction.

However, there is a second Creative Commons restriction (and variations of it in other licenses) that is of paramount concern for organizations providing open and distance learning services: this is the restriction allowing users of a work to “alter, transform, or build upon [the] work” but only under the condition that “the resulting work...” may [be] distribut[ed] only under the same, similar or a compatible license.” This is clearly one of the most popular types of Creative Commons licenses, and it is used by Wikipedia and its sister projects, as well as being assigned to about 45 million photos on Flickr. (One exception to this pervasive use is provided by the Connexions project, see below.) This particular type of restriction has been referred to as “copyleft,” implying a kind of inverse of the restrictions defined in copyright. Instead of forbidding the redistribution and alteration of a particular work, this restriction allows these actions, but only under the condition that resulting works carry the same licensing restriction. This type of licensing has also been derisively characterized as “viral” or even “cancerous” by commercial developers and vendors (e.g. Steve Ballmer of Microsoft). The reason for this is because adding a relatively minor copyleft component (e.g. a photo or an audio clip) to a substantial work under copyright (e.g. course documentation) would have the effect of changing the substantial work from being “copyright” to “copyleft.” Through the addition of a relatively small Creative Commons component, the entire resource would now have to be made available (e.g. to enrolled students) *without* restrictions on its further distribution and revision. This means that the resource has to be explicitly described as being free not only of legal restrictions, but also free also of unnecessary technological barriers to access (e.g. being distributed in a PDF format that does not allow for editing and other operations).¹ This presents obvious difficulties related to branding, quality assurance and also the larger business model of some educational institutions.

However, this provision to “share alike” is not absolute or unconditional, and the extended legal documentation that constitutes both the Canadian and US versions of this license identifies an important set of exceptions. These exceptions provided by the definition of “collective work” in the license. Such a collective or aggregate creation is defined in this text in relation to a given resource (the “work”) licensed under this creative commons provision:

"Collective Work" means a work, such as a dictionary, yearbook, encyclopedia, or a newspaper, review magazine or singular periodical and any work written in distinct parts by different authors, or in which works or parts of works of different authors are incorporated. A work that constitutes a Collective Work will not be considered a Derivative Work (as defined below) for the purposes of this license. (Attribution-ShareAlike 2.5 Canada, 2009)

This definition presents the collective work, in other words, as kind of aggregate work which is exempt from the “viral” characteristic of copyleft. A copyleft resource (with a creative commons “share alike” license) can be “incorporated” into a collective work—such as a “review magazine or singular periodical”—without the resulting aggregation being seen simply as a “derivative work” and as subject as a whole to copyleft. This exception is made in the case of works that can be seen to be aggregations

¹ “ You may not Use the Work with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this License Agreement.”

of multiple contributions, with each contribution (in the words of the American license) “constituting [a] separate and independent” work in itself.

Given the wording of this provision, quoted above, it is possible to draw conclusions about a number of types of resources and forms of resource integration that are likely to fit with the quality concerns and business model of many distance and open learning organizations. A number of types of combinations of copyleft and (conventional) copyright resources –and the kind of collective work that they would constitute together-- are listed in the three tables below. Also, in as many cases as possible, examples of collections providing the type of resource referenced are collections that are ranked and reviewed in this report. In the case of the first table, *it seems quite clear* that a number of kinds of creative commons or copyleft resources could be used together with copyright resources to constitute a collective work:

Table 1: Combinations of educational works likely to constitute a collective work

Copyleft Resource	Copyright Resources	Collective Work incorporating both
Textbook (e.g. from textbookrevolution.org)	Online course resources or a “course manual”	“Course” constituted through the provision of the two resources. (Note: the term collective work may not even need to apply for this kind of use.)
Article (e.g. from DOAJ)	Other articles as readings	Readings associated with course.
Video or Audio podcast ²	Other multimedia resources	Bibliography of multimedia resources for course

Given the terms of the wording, above, it is *difficult to be certain* about the status of other resource types and their combinations on other kinds of collective works. Examples of these are provided in table two, below.

Table 2: Combinations of educational works that may constitute collective works

Copyleft Resource	Copyright Resource	Collective Work incorporating both
Podcast on iTunes University (accessed via iTunes)	Integrated course resource online (e.g. a course manual instructing students to access iTunes podcasts at specific points)	Integrated course resource requiring the use of other resources.

² The effective limitation of the collective work to “written works” in the Canadian version of the license casts the viability of this last example into some doubt where “Canadian” resources referencing this license are concerned. Note that such a limitation (to text and writing) is *not* present in the American license.

Collection of resources (e.g. merlot.org)	Integrated course resource online referencing specific resources in the copyleft collection.	Integrated course resource requiring the use of other resources.
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Finally, given the terms of the wording, above, it is *nearly certain* that collective works developed from the following types of resources would *not* be allowed:

Copyleft Resource	Copyright Resource	Collective Work incorporating both
Interactive resource (e.g. simulation from merlot.org)	Specific exercises for the use of the simulation	Fully integrated course manual or other kind of resource.
Photograph from Flickr or diagram from Wikipedia	Text referencing photo or diagram and its particular contents.	Fully integrated course manual or other kind of resource.
Video or Audio podcast (e.g. clip from YouTube EDU)	Web page from course materials that directly embeds YouTube player and clip, and adds contextualizing text.	Password protected Web (HTML) documents constituting course materials

It is important to note, based on these sets of resource combinations that types of resources and forms of integration are of paramount importance. As long as resources licensed under the “share alike” provision are unmodified and otherwise retain their integrity as individual works, they can be brought together with other materials in Collective Works. It also seems to be important that the nature of the resulting type of collective work resemble a familiar form or genre (e.g. a course, a reading or resource list, a bibliography, an anthology, etc.).

Specific Criteria for Selection and Ranking

The reason for the extended discussion of licensing terms, above, and the examples of their application in different situations, derives from the fact that licensing is the most important and complex criterion involved in the selection and ranking of collections.

1. **Licensing flexibility (rated out of 5):** those resource collections whose resources are licensed in a flexible manner, and/or can be readily used in a Collective Work, as discussed above. The criterion for this involves not only the specific licensing of the work, but also the kind of aggregation and integration that is possible or not allowed.
2. **Quality (rated out of 3):** The quality of the resource collection is generally assessed through reference to independent reviews of the resource, or the existence of peer reviews for the resources collected. Also considered is the reputation of sponsor or affiliate, and the history of the resource collection.

3. **Stability (rated out of 3):** The stability of the resource collection is assessed either in terms of its current longevity (i.e. number of years in existence) or in terms of explicit measures taken by the collection to preserve its materials.
4. **Fitness for purpose (rated out of 5):** Their suitability to open course designs, based on the subject matter and type of resource involved. This criterion is applied and explained on an item-by-item basis.

Top-Ranked Collections (rated 9 or higher)

Note: the resources listed as “top-ranked” all provide resources that offer a high degree of licensing flexibility. At the very least, all can be integrated into the kinds of collective works listed in table one, “combinations of educational works likely to constitute a collective work.”

rated 14	Connexions	URL: http://cnx.org	No. of Resources: about 15,000 instructional “modules”
Stability: High (3). In existence since 1999; identified closely with and supported by Rice University.		Quality: Varies (2). Connexions is <i>working towards</i> a peer-review approach.	
Description: “a place to view and share educational material made of small knowledge chunks called modules that can be organized as courses, books, reports, etc.” Covers all levels of education, but has a post-secondary emphasis.”			
Licensing (5): All resources are available for use <i>only requiring attribution</i> (for their authorship). All resources <i>are exempted from copyleft licensing</i> . As a result, the instructional units can be mixed with others to create derivative resources that can be subject to any kind of licensing, and are freed of the restrictions discussed above in this report.			
Fitness for purpose (4): Despite the varying quality of the resources in this collection, the licensing used makes this collection of significant potential strategic value to distance and open learning organizations. The emphasis on post-secondary and North American education, as well as the availability of some resource sets as textbooks adds to this value.			

rated 14	DOAJ Directory of Open Access Journals	URL: http://www.doaj.org	No. of Resources: Over 4000 journals; likely well over 30,000 articles
Stability: High (3). in existence since 2002; selected contents archived digitally		Quality: High (3). All resources (articles) subject to peer review.	
Description: “This service covers free, full text, quality controlled scientific and scholarly journals. We aim to cover all subjects and languages.”			
Licensing (5): Articles of the kind collected by the DOAJ can be aggregated to form collective works; many of the articles provided are licensed using Creative Commons licenses.			
Fitness for purpose (3): Not a collection educational resources strictly speaking, but potentially of great value for postsecondary contexts, where students are being exposed to academic writing and research. Using articles from this collection obviates the need for library licensing of specific articles, and for users			

to navigate access procedures usually associated with this institutional licensing. All subject areas are covered in this collection.

13	Wikimedia Commons	URL: commons.wikimedia.org	No. of Resources: more than 5,000,000
Stability: High (3). Wikibooks went online in 2004, is closely affiliated with the Wikipedia project, and is a part of the Wikimedia project. It consequently has a relatively robust funding model.		Quality: Varies (2). Contents are not peer reviewed in a strictly systematic manner. Quality needs to be evaluated on a case-by-case basis.	
Description: “...a repository of images, sound and other multimedia files.[2] It is a project of the Wikimedia Foundation, from which uploaded files can be used across all Wikimedia projects[3] in all languages, including Wikipedia, Wikibooks, Wikisource and Wikinews, or downloaded for offsite use.”			
Licensing: Varies, but can be flexible (4). Licensing conditions vary, with many resources being associated with copyleft provisions. However, there are many resources (above all images and diagrams) that are available as a part of the public domain.			
Fitness for purpose (4): Despite the need to evaluate quality on a case-by-case basis, this collection has the potential to reduce overall delivery costs substantially for some courses, especially since it can provide images determined to be in the public domain.			

13	Wikibooks	URL: http://wikibooks.org	No. of Resources: 37,978 pages or content modules
Stability: High (3). Wikibooks went online in 2003, is closely affiliated with the Wikipedia project, and is a part of the Wikimedia project. It consequently has a relatively robust funding model. A particular, stable version of any book or resource can be readily accessed, avoiding the problems presented by ongoing editorial work.		Quality: Varies (2). Contents are not peer reviewed in a strictly systematic manner. Quality needs to be evaluated on a case-by-case basis.	
Description: “Textbook Revolution is a student-run site dedicated to increasing the use of free educational materials by teachers and professors. At Textbook Revolution, you’ll find links to textbooks and select educational resources of all kinds. Some of the books are PDF files, others are viewable online as e-books. All of the books are offered for no-cost (gratis) by their respective copyright holders.”			
Licensing: Reasonable. (4) All contents are subject to copyleft licensing (a CC license requiring			

attribution and “sharing-alike”). However, because textbooks are generally not considered as constituting parts of derivative *or* collective works, the resources here can be readily used by distance and other learning organizations as whole books or book chapters.

Fitness for purpose. (4) Despite the need to evaluate quality on a case-by-case basis, this collection has the potential to reduce overall delivery costs substantially for some courses.

11	Textbook Revolution	URL: http://textbookrevolution.org	No. of Resources: Appx. 600 books
Stability: Varies (2). This collection only links to resources on sites and pages maintained separately (mostly by book publishers). Ongoing availability should be checked on a resource-by-resource basis.		Quality: High (3). Publishers’ review processes have been applied to most resources in this collection.	
Description: “Textbook Revolution is a student-run site dedicated to increasing the use of free educational materials by teachers and professors. At Textbook Revolution, you’ll find links to textbooks and select educational resources of all kinds. Some of the books are PDF files, others are viewable online as e-books. All of the books are offered for no-cost (gratis) by their respective copyright holders.”			
Licensing: Varies (3). Licensing varies, and the large majority of resources are actually copyrighted with all rights restricted. However, because the resources are made freely available and as textbooks generally do not need to be used to create derivative or collective works			
Fitness for purpose (3): These are in many cases commercially produced textbooks that are being made available at no cost. Despite the need to evaluate licensing and stability on a case-by-case basis, this collection has the potential to reduce overall delivery costs substantially for some courses.			

Lower-Ranked Collections (rated 10 or less)

10	TED Talks	URL: www.ted.com	No. of Resources: over 450 20 min. talks
Stability: Medium (2). Supported by the Sapling Foundation and by corporate sponsors, but in existence on the Web only since 2007		Quality: High (3). Process for selecting speakers is unclear, but only high-profile academics and others are selected.	
Description: “We're building here a clearinghouse that offers free knowledge and inspiration from the world's most inspired thinkers, and also a community of curious souls to engage with ideas and each			

other.”
Licensing: Relatively restrictive (2). The collection makes available relatively short or small resources using CC licensing, but also requires them to be shared alike.
Fitness for purpose (3). It should be possible to link to individual resources from Open Learning course material, but integrating the material in any other way is likely to be problematic from a licensing perspective.

10	MERLOT (Multimedia Educational Resource for Learning and Online Teaching)	URL: www.merlot.org	No. of Resources: 21,100 materials
Stability: High (3). In existence since 1997; supported by the California State University system.		Quality: High (3). Peer review processes applied to all resources; various resource rankings available.	
Description: “MERLOT is a leading edge, user-centered, searchable collection of peer reviewed and selected higher education, online learning materials, catalogued by registered members and a set of faculty development support services. MERLOT's vision is to be a premiere online community where faculty, staff, and students from around the world share their learning materials and pedagogy..”			
Licensing: Relatively restrictive (2). All materials are made available through a CC license requiring them to be attributed and “shared alike.” Materials are likely to be used in part, and not as a whole (e.g. in the way a textbook or research article is used). This means that it is unlikely that any uses can be made in the development of copyright material.			
Fitness for purpose (2): It should be possible to link to individual resources from typical course material, but integrating the material in any other way is likely to be problematic from a licensing perspective.			

9	webcast.berkeley	URL: http://webcast.berkeley.edu	No. of Resources: 100 full courses, goal to record “full undergraduate courses”
Stability: High (3). In existence since 1995; identified closely with and supported by the University of California at Berkeley.		Quality: High (3). Quality of courses and events generally assured through the reputation of the host university. Criteria for technical quality are also	

	in place.
Description: “Every semester, UC Berkeley webcasts select courses and events for on-demand viewing via the Internet. webcast.berkeley course lectures are provided as a study resource for students and are not sanctioned as a substitute for going to the course lectures.”	
Licensing: Very restrictive (1). Conventional copyright for materials up to 2007; beginning in 2007, the default license attached to media recordings for distributions is Creative Commons – non-commercial, attribution, no derivatives.	
Fitness for purpose (2). Can be linked from course material, but integrating these recordings in any other way is likely to be problematic from a licensing perspective.	

9	MIT Open Courseware	URL: http://ocw.mit.edu	No. of Resources: 1900 full courses, “virtually all” of MITs courses
Stability: High (3). In existence since 1999; identified closely with and supported by the Massachusetts Institute of Technology. World famous.		Quality: High (3). Quality of courses and events generally assured through the reputation of the host university. Criteria for technical quality are also in place.	
Description: “MIT OpenCourseWare (OCW) is a web-based publication of virtually all MIT course content. OCW is open and available to the world and is a permanent MIT activity.”			
Licensing: Relatively restrictive (2). All materials are made available through a CC license requiring them to be attributed and “shared alike.” Materials are likely to be used in part, and not as a whole (e.g. in the way a textbook or research article is used). This means that it is unlikely that any uses can be made in the development of copyright material.			
Fitness for purpose (2). It should be possible to link to individual resources from Open Learning course material, but integrating the material in any other way is likely to be problematic from a licensing perspective.			

9	OpenLearn Learningspace	URL: openlearn.open.ac.uk	No. of Resources: “hundreds of study units”
Stability: Medium (2). Supported by the Hewlett Foundation and by the Open University, but in existence only since 2007.		Quality: High (3). Quality of materials generally assured through the reputation of the host university.	

Description: “The OpenLearn website gives free access to Open University course materials. This is the LearningSpace, where you'll find hundreds of free study units, each with a discussion forum. Study independently at your own pace or join a group and use the free learning tools to work with others.”
Licensing: Relatively restrictive (2). The collection makes available relatively small, modular resources using CC licensing, and requires them to be shared alike.
Fitness for purpose (2): It may be possible to link to individual resources from typical online course material, but integrating the material in any other way is likely to be problematic from a licensing perspective. Resources on this site are presented as suitable for private study, rather than course use.

9	Intute	URL: openlearn.open.ac.uk	No. of Resources: “hundreds of study units”
Stability: Medium (2). Supported by the UK Joint Info. Systems Committee (JISC), but in existence only since 2007.		Quality: High (3). Quality of materials assured through review by subject specialists.	
Description: “Intute is a free online service that helps you to find the best web resources for your studies and research.”			
Licensing: Relatively restrictive (1). Type of license varies from one resource to another, with many being subject to full copyright restrictions.			
Fitness for purpose (2). It may be possible to link to individual resources this collection, but integrating the material in any other way is likely to be problematic from a licensing perspective. Resources on this site are presented as suitable for private study, rather than course use.			

Note: There are many other resource collections that would receive descriptions and rankings similar to the last four or five collections listed above. The reason for this is that the collections in each case provide course materials suited for independent study (lowering their fitness rank below 4), and are licensed under a CC license requiring “sharing alike” (lowering their) Also, many of these collection focus on small modules of content, and are in each case relatively new (raising the question of their sustainability: see Friesen 2009). As a result, they are not reviewed in detail. These collections, and a ranking for each is provided:

- **OCW Finder (10):** ocwfinder.com
- **OER Commons (10):** www.oercommons.org
- **Wikiversity (9):** wikiversity.org

- **WikiEducator** (9): wikieducator.org
- **ccLearn** (9): ccllearn.org
- **S*OLR** (8): solr.bccampus.ca

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