

A Free Content and Free and Open Courseware implementation strategy for the University of the Western Cape

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1. Introduction

Tertiary institutions the world over are recognizing the value of freely sharing educational curricula and content, collaborating in their further development and extension, and doing so under the umbrella of free and unrestricted access to knowledge. The word “free” in this case refers to liberty, not to absence of price, although absence of direct price is a common side-benefit of liberty, just as it is in the software arena.

One of the more mature programs in this area is the Open Courseware Initiative (OCW) run by the Massachusetts Institute of Technology (MIT) in the USA, but many other institutions have similar initiatives and many more are now creating open courseware initiatives of their own. Evaluative research and user feedback from the MIT initiative demonstrate that an OCW has a positive impact on education around the world. Open courseware embraces the values of academic

staff with respect to teaching and contributing to their disciplines, and reflects highly on the institution.

UWC has been invited to join a global consortium of institutions involved in OCW, membership of which has no fees or requirements other than a commitment to OCW principles. Since the notion of Open Content features in our Integrated Information Strategy and our E-Learning Strategy, and UWC is widely known and respected for its work in Free and Open Source Software, the time is opportune for us to create this implementation strategy and to use it to build a UWC OCW-type of initiative.

1.2. Definitions

The definitions presented here are based on a combination of formulations derived from published literature and websites (e.g. Lessig 2001, MIT OCW website), as well as personal involvement in researching free and open content over several years (e.g. Keats 2003a, b, c, Keats & Shuttleworth 2003, Keats *et al.* 2003).

Free Content. Content that contributes to social good by recognizing four freedoms and one restriction that safeguards and promotes those freedoms. With free content, anyone has the right:

- to copy, distribute, display, and perform the work without requiring any further permission than that granted by this freedom (freedom 1);
- to exercise this freedom for any purpose under any circumstances, including commercial use (freedom 2);
- to make derivative works (freedom 3);
- to copy, distribute, display, and perform the derivative work (freedom 4).

The restriction below ensures that the first four freedoms are passed on in derived content:

- if the work is altered, transformed, or built upon in any way, resulting work may only be distributed under an identical license that includes this restriction (copyleft restriction).

An optional further restriction is permissible with Free Content in that it may require the original author to given credit. This restriction stipulates

- The original author(s) or producers(s) of the content as well as the author (s) or producer(s) of derived works must be acknowledged and given credit for their contribution.

The emphasis in philosophy of Free Content is on social good through promoting collaborative development and the adaptation and expansion of content.

Free Courseware: Free Content that is arranged in Courses and made available in a structured manner via the Internet.

Open Content: Content that includes some, but not necessarily all, of the freedoms of Free Content. For example, Open Content may restrict the conditions under which the content can be used (for example, it may impose a non-commercial restriction, or not allow the production of derivative works).

The emphasis in philosophy of Open Content is access while protecting the author's wishes to restrict access or usage to certain conditions. All Free Content is Open Content, but not all Open Content is Free Content.

Open Courseware: Open Content that is arranged in Courses and made available in a structured manner via the Internet. All Free Courseware is Open Courseware, but not all Open Courseware is Free Courseware.

2. Licenses for Free and Open Content

The Creative Commons is an organization founded by Stanford Law professor, Lawrence Lessig to enable authors of content who do not wish to apply the "all rights reserved" aspect of default copyright to choose which rights they make available to others without the need to consult lawyers and pay for legal services. Before Creative Commons, there were also Free and Open licenses for content, but the range of Creative Commons licenses now available cover the range and intent of other licenses, so here we will make use of Creative Commons licenses only. Creative Commons is active in South Africa, and at the time of writing is based at the LINK Centre at the University of the Witwatersrand in Johannesburg. Creative Commons SA has adapted the licenses to the South African legal environment.

3. Licensing UWC content

This section has appendices (Appendix I, II, III) which go into some detail regarding licensing because licensing is a major minefield. UWC adopts the following approach to content licensing:

1. Where no *immediate* commercial revenue is expected

The default license for educational content produced at UWC is the Creative Commons Attribution-Share Alike (**by-sa**) license. This is the license that most respects freedom, by allowing copying for any purpose and production of derivative works as long as those derivative works are made available to the community under identical terms. It is this restriction that ensures any derivative works, even if done for commercial purposes, come back to the author and the community. This license is represented by the symbols , which should be used consistently.

2. Where content is expected to be published commercially

The appropriate license is Creative Commons *Attribution Share Alike Non-commercial* (**by-sa-nc**), which allows content to be copied and extended for non-commercial purposes only. It may seem counter-intuitive, but content published in this manner generally earns greater revenue from sales than content published under full copyright. Following the elapse of a period of time after which commercial revenue is unlikely, to be gained, the license will revert to **by-sa** even for work in this category. The recommended time period is 5 years, but the authors are free to alter this to a shorter or longer period depending on circumstances. This license is represented by the symbols , which should be used consistently. The license should stipulate  reverting to  on *date* where license reversion is applied.

3. Where derivative works are not appropriate, such as when the item is an opinion piece

The appropriate license under is Creative Commons Attribution-No Derivatives (**by-nd**). license is represented by the symbols 

There may be rare circumstances where these licenses are not possible, for example, when publishing in a collection where the publisher does not allow these licenses. However, in most cases, even diehard publishers will allow individual articles or chapters to publish under such licenses when asked to do so. Academic staff are therefore encouraged to request that their article to be granted a **by-sa** license whenever possible.

4. Mechanisms of publication

To achieve a Free and Open Courseware approach at UWC, it will be necessary to provide facilities, training and incentives to academic staff and ensure that the mechanisms of publication are available and easy to use.

4.1. Free Content

This section concerns content collections that are not organized into courses, or that comprise the source materials used in preparing courses (e.g. raw images with layers intact, unedited audio, etc).

UWC will provide a server and software that is capable of making available individual items of content and source files that are used in the creation of Free Courseware. These may include collections of photographs and other images, audio, video, multimedia, and documents. These materials will contain metadata that will be made available to search engines, and the content will be available for download without restrictions. Only content that is licensed under a **BY** or **BY-SA** content will be hosted on this system to avoid license conflict with UWC content.

When requested to do so, and it is deemed feasible and affordable, UWC may mirror other collections of Free Content locally. Only content that is consistent with the Free Content BY-SA license will be mirrored at UWC to avoid license conflict with UWC content.

4.2. Free and Open Courseware: implications for staff

In order for UWC to benefit from and contribute to a Free and Open Courseware initiative, it is vital that - at a minimum - all courses be represented at a basic level on the UWC e-learning platform. Therefore, *UWC academic staff will have to*

make their syllabus, mark distribution, assessment schedule available on the Worldwide web for students to access via the UWC e-learning platform at <http://elearn.uwc.ac.za/>. This information will be maintained and current at all times. Tools will be provided to facilitate this process and make it as easy and simple as possible.

Where academic staff have developed course readers, presentations in PowerPoint or other formats, and other learning materials that do not contain copyrighted items or items with an inconsistent license, those materials may also be made available as documents linked to the appropriate course. Where such materials contain copyrighted items, advice will be sought from the E-learning Division of ICS or the Library regarding copyright clearance. Please note that DALRO permissions *do not* allow the making of copyright cleared material available through open courseware, although they may, subject to legal requirements, be made available in protected areas on the e-learning server.

Where course content is created in the e-learning platform, a default BY-SA license will be available and authors are requested to use it for all original content. Where this would result in license conflict, the authors are encouraged to get permission of the source to use the material under a BY-SA license. Failing this, such items should be marked according to their license even where a BY-SA license is used for the bulk of the content.

Students are required to interact with the e-learning platform in order to obtain up-to-date information about their courses, assessment schedules, etc. Lecturers are encouraged to use the e-learning platform to communicate with students on a regular basis.

The E-learning division at UWC will provide training workshops, just-in-time learning opportunities and respond to queries regarding UWC's Free and Open Content Initiative.

5. Access to Free and Open content and courseware from other sites

UWC will provide access to other Free Content and Open Courseware Repositories, as well as crucial Free Software that is suitable for use with Free Content and Open Courseware.

In Particular, UWC will host mirrors of the Wikipedia project, the MIT Open Courseware Initiative, and other related initiatives as determined from time to time. Deans of Faculties may request a site to be mirrored by placing a call to the helpdesk, which will trigger an investigation into the feasibility of mirroring by ICS, and a report will be provided to the Dean within 10 working days.

UWC will work as part of a global consortium working to ensure the interoperability of Free and Open Courseware, and where possible with adhere to agreed standards and specifications on both incoming and outgoing content.

6. Costs of this initiative

This approach has some costs, some of which should be considered part of the normal course of doing business and covered by normal ICS budgeting processes. Academic staff training and just-in time learning opportunities are provided as part of the implementation of the e-learning strategy by the e-learning section within ICS.

UWC will need to maintain a dedicated server for mirroring content from other sites, provide the management of that server, and provide the bandwidth. The management of the server can be accommodated in normal operations, the server will run only Free Software, so the only cost is the hardware (R90 000, with replacement every three years). While the incoming mirroring will use bandwidth, most of this can be done during off-peak times, so the additional load on our bandwidth should be minimal.

Where we will not be able to control the time of bandwidth use is when other sites access our sites to gain access to our content. It is impossible to predict the scale of this use, but it could be significant, and given the current high cost of bandwidth, this could amount of approximately R100 000 per year. This could reduce significantly if South Africa's bandwidth costs are brought more in line with bandwidth costs in the developed world. The high cost of bandwidth in South Africa is currently hampering education and development.

There will be a cost to UWC of attending international forums relating to Free Content and Open Courseware, allowance for one such event a year to be

attended by a senior representative of UWC, either the Executive Director, Information & Communication Services or the Vice Rector, Academic. This will amount to approximately R30 000 per year in travel costs, and should be incorporated into the ICS e-learning budget.

Funding and support for the creation of educational content will be sought from potential sponsors to cover the cost of:

- program coordination;
- program support;
- subsidization of content production;
- awards for best quality content.

The implementation of this strategy is not, however, contingent upon this support.

7. Literature cited

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5. Keats, D.W., M. Beebe, and G. Kullenberg, 2003. Using the Internet to enable developing country universities to meet the challenges of globalization through collaborative virtual programmes, *First Monday*, volume 8, number 10, URL: http://www.firstmonday.org/issues/issue8_10/keats/index.html
6. Lessig, L. 2001. *The Future of the Ideas: the Fate of the Commons in a Connected World*. Vintage, 384 pp.
7. MIT OCW website, URL: <http://ocw.mit.edu>

Appendix I. Creative commons license elements (modified from <http://creativecommons.org/about/licenses/> under Creative Commons Attribution License)

Symbol	Name	Meaning
	Attribution	You let others copy, distribute, display, and perform your copyrighted work —and derivative works based upon it —but only if they give you credit.
	Noncommercial	You let others copy, distribute, display, and perform your work —and derivative works based upon it —but for noncommercial purposes only.
	No Derivative Works	You let others copy, distribute, display, and perform only verbatim copies of your work, not derivative works based upon it.
	Share Alike	You allow others to distribute derivative works only under a license identical to the license that governs your work.

Appendix II. Creative Commons license elements assembled into licenses

Symbols	Name	Meaning
	Attribution Non-commercial No Derivatives (by-nc-nd)	This license is the most restrictive of the six main Creative Commons licenses, allowing redistribution. This license is often called the "free advertising" license 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. Any license which includes the Non-commercial restriction is potentially damaging to educational content.
	Attribution Non-commercial Share Alike (by-nc-sa)	This license 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 license, 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 license, so any derivatives will also be non-commercial in nature. Any license which includes the Non-commercial restriction is potentially damaging to educational content.
	Attribution Non-commercial (by-nc)	This license 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. Any license which includes the Non-commercial restriction is potentially damaging to educational content.
	Attribution No Derivatives (by-nd)	This license allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to you. It is particularly suitable to opinion pieces.

	<p>Attribution Share Alike (by-sa)</p>	<p>This license 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 license is often compared to the Free Software license. All new works based on yours will carry the same license, so any derivatives will also allow commercial use. This is the license that most respects the rights of the author and users as it has a restriction ensuring that the freedoms given are protected in derivative works.</p>
	<p>Attribution (by)</p>	<p>This license 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 licenses offered, in terms of what others can do with your works licensed under Attribution. However, it is less free than the Attribution Share Alike license as it does not compel producers of derivative works to give anything back.</p>

Appendix III. Baseline rights and restrictions in all Creative Commons licenses

All Creative Commons licenses have many important features in common.

Every license will help you

- retain your copyright
- announce that other people's fair use, first sale, and free expression rights are not affected by the license.

Every license requires licensees

- to get your permission to do any of the things you choose to restrict —e.g., make a commercial use, create a derivative work;
- to keep any copyright notice intact on all copies of your work;
- to link to your license from copies of the work;
- not to alter the terms of the license
- not to use technology to restrict other licensees' lawful uses of the work

Every license allows licensees, provided they live up to your conditions,

- to copy the work
- to distribute it
- to display or perform it publicly
- to make digital public performances of it (e.g., webcasting)
- to shift the work into another format as a verbatim copy

Every license

- applies worldwide
- lasts for the duration of the work's copyright
- is not revocable

Appendix IV. Creative commons licenses in relation to degree of freedom. For content with the NC restriction and with the ND restriction, freedom is very limited. Public domain and BY licensed content is free, but the freedom is not protected in derivative works. Only in the BY-SA license is freedom protected and ensured by the copyleft ShareAlike requirement.

