

The new miracle of ‘free’ content in education



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Sir John Daniel, President and Chief Executive Officer of the Commonwealth of Learning (COL) speaks of social software and Open Education Resources (OERs) as a new miracle in education. The miracle of OERs is that sharing and adaptation of digital content is now easy (Daniel, West & Mackintosh 2006). When knowledge is stored in digital formats and combined with the capabilities of social software it is possible for anyone in the world to modify and adapt the materials for local use.

The notion of sharing knowledge is not a new phenomenon. Since medieval times, teachers have shared their knowledge with learners and scholars have shared their research findings with colleagues in the pursuit of new knowledge. However, advances associated with the printing press and the commercialisation of the publishing industry has locked down free sharing of printed texts through copyright legislation. While the publishing industry must be commended for their distribution of high quality printed materials, the downside is that we cannot freely adapt and share this content with others. This is a huge barrier for the overwhelming majority of our society who need free access to quality education materials.

The growing adoption of social software, combined with increasing awareness of the benefits of free content, show huge potential for education. This article provides a brief summary of these trends and shows how the Commonwealth of Learning is providing free access to these technologies for educational purposes throughout the Commonwealth.

The basics of social software

Social software

Social software refers to a range of software tools that enable us to connect through the Internet and work collaboratively on common projects. It is social because people meet and interact together on the Internet in both synchronous and asynchronous situations. Examples of social software include: instant messaging, chat, blogs, discussion forums, and wikis. The rapid uptake of social software can be ascribed to the ease with which anyone with an Internet connection and browser software can add or modify content on the Web without the need for knowledge of more complex HTML mark-up language.

Free/libre open source software

The concept of social software should not be confused with Free/libre open source software (FLOSS) as there are both proprietary and FLOSS variants of social software tools. However, FLOSS and social software share a common foundation. Both initiatives recognise that if we work collaboratively, the results of our combined efforts are likely to be better than working in isolation. In other words, the products of our collaborative efforts are more than the sum of its parts.

The FLOSS movement is our best example of the power of social commitment especially when we work together to achieve a common goal. The ethic of “social hackerism” – that is, working together for the benefit of society – is a successful methodology for developing software that results in robust and reliable solutions. Its success is rooted in the fundamental human right of freedom of choice. It is this freedom of association that makes FLOSS what it is. We are free to use (or not to use) FLOSS and we are free to develop and adapt the software as long as we are prepared to share the results of our efforts under the same conditions as we received this freedom in the first place.

The ‘social hacker’ ethic is not limited to the development of software and with the help of social software we can apply these principles to other areas of social endeavour. Education is a prime example; educators around the world can work together on the development of free content, which anyone can use, distribute or modify for their own purposes. The growth in free content for education will be exponential. Unlike software development, which requires high level programming skills, anyone who can type has the opportunity to participate in developing free content for the benefit of humanity.

The Wikipedia revolution

Opening new doors

Social software combined with an ingenious licensing trick inspired by the free software movement is opening new doors on the road to achieving education for all.

The free software movement developed a licensing alternative, often called *copyleft*, whereby the creator of the software uses copyright law to provide a license that allows free use and adaptation of the original creation on condition that the software



will always remain free. There are similar copyleft licenses that are used for digital content, for example, the GNU Free Documentation License and a Creative Commons License that includes a share-alike provision. These licenses aim to protect three essential freedoms:

- the freedom to study and apply the information;
- the freedom to copy and distribute the information;
- the freedom to distribute modified versions.

Free content is infinitely scalable because the share-alike provision of these licenses enables anyone to add value to previous versions and release the results of their efforts for more people to share. A prime example of this scalability is to be seen in the Wikipedia project which is the world's largest free online encyclopaedia and is currently ranked as the 16th most visited website on the planet.

The Wikipedia vision

The Wikimedia Foundation, which oversees Wikipedia, has a compelling vision:

Imagine a world in which every single person is given free access to the sum of all human knowledge. That's what we're doing. And we need your help.

They are making excellent progress with approximately 1.4 million articles of free content on the English encyclopaedia developed by people like you and me. This is made possible through wiki technology that enables anyone with an internet connection and a browser to add or modify content on the web without the need for knowledge of HTML mark-up.

The following features of the Wikipedia project are worth highlighting in the context of our focus on social software for furthering the development of free content:

- anyone in the world is free to contribute a new article, adapt and/or modify an existing article;
- all text is contributed under the GNU Free Documentation License, a copyleft license which enables users to distribute and adapt the articles from Wikipedia for different purposes;
- the quality of Wikipedia articles is co-ordinated by an open community committed to the philosophy of freedom and a collective conscience;
- Wikipedia is powered by Mediawiki, an open source software project.

Therefore, at a technical and practical level, it is at least conceivable to generate and distribute all the content we need for education as free content. Unfortunately, the barriers to realising this vision are not technological. They are rooted in a complex web of social, economic and political reasons.

Open education resources as an evolving concept

In recent times, education institutions are beginning to see the benefits of open education resources.

In 1998 David Wiley's work on digital learning objects led to coining the concept of 'open content' in education circles (Wiley

2006). The foundation of the Creative Commons license in 2001 and MIT's announcement of its OpenCourseWare initiative in the same year combined with generous funding for open content by institutions like the William and Flora Hewlett Foundation have raised the profile of free content in education. So much so, that UNESCO in 2002 held an international forum whereby delegates wished 'to develop together a universal educational resource available for the whole of humanity' (Wiley 2006) and coined the concept Open Education Resources.

Degrees of freedom

Sadly, not all OERs are equally free. Providing a print version of an educational resource in PDF format for download at no cost for non-commercial purposes may appear to qualify as an open education resource. However, there are material restrictions of freedom in this example. For instance, the PDF format does not allow for users to easily adapt the materials because the source files are not necessarily available for editing purposes. Moreover, the good intentions of limiting a resource for non-commercial purposes may actually prevent the distribution of free content to people who need it most, through cost recovery schemes to facilitate the distribution of free content in a variety of formats.

Clearly, the provision of a resource at no cost does not necessarily ensure that the future freedoms are protected. The education movement can learn much from the founder of the free software foundation, Richard Stallman, who reminds us that: 'Free software is a matter of liberty not price. You should think of "free" as in "free speech"'.

Educators from around the world are urged to think carefully about which 'free' they mean when creating or using open education resources. If we are serious about achieving education for all, there is only one freedom that can make a real difference and that's freedom as in freedom of speech. This has implications for choosing the right licence for your OER project so that it meets the requirements of the free content definition (<http://freedomdefined.org/Definition>).

COL's Wikieducator

The phenomenal success of Wikipedia proves that wiki technology is an ideal vehicle for the collaborative authoring of open education resources. COL introduced Wikieducator (www.wikieducator.org) to leverage the power of these emerging technologies for education across the Commonwealth. Wikieducator is turning the digital divide into digital dividends using free content and open networks. It is an evolving community intended for the collaborative:

- *planning* of education projects linked with the development of free content;
- *development* of free content on Wikieducator for eLearning;
- work on building OERs on *how to create* OERs;
- networking on *funding proposals* developed as free content.

The community is based on the core values of social inclusion and participation of all people in our networked society. Access to ICTs should be seen as a fundamental right of knowledge citizens – not an excuse for using old technologies. A key initiative of



Wikieducator is to develop free resources for potential users to acquire the necessary skills to collaborate as equal participants in the community. In this regard, COL has recently announced plans to institute the Commonwealth Computer Navigator's Certificate (CCNC). This COL initiative will widen access to ICT skills training using free software and will be distributed as free content for anyone to use, modify and distribute.

Underpinned by the principles of the freedom culture, developing societies are taking charge of their own destinies and embracing the power of digital technologies. This is clearly demonstrated by the Virtual University for the Small States of the Commonwealth, where 13 countries are collaborating online to develop free content on COL's WikiEducator to expand access to education throughout the Commonwealth.

While students in many developing regions of the world are unlikely to have Internet connectivity, it is technically possible to generate printed study materials from Wiki technology. This will require a few technical modifications, but this is relatively easy to achieve when using open source software because of unrestricted access to the source code. COL is working with the open source community to develop these printing capabilities so that Wiki technology can be used for collaborative authoring of printed educational materials, thus widening access to free educational materials.

Conclusion

COL is committed to education for the global good of learning for development. Consequently, empowering educators and learners with the freedom to use the technologies of their choice in conjunction with open education resources is a strategic priority for our work.

Sir John Daniel urges us to espouse another vision of globalisation, which is to use open and distance learning, ICTs, social software and open educational resources to create a global intellectual commons.

The miracle of a global intellectual commons is that it cannot suffer the tragedy of the commons. That is because when you give your knowledge to someone you still have it to use yourself. (Daniel, West & Mackintosh 2006)

References

- Daniel, J., West P., & Mackintosh, W. (2006). *Exploring the role of ICTs in addressing educational needs: identifying the myths and the miracles*. Keynote address. NADEOSA 10th Anniversary Conference. Pretoria, South Africa: 23 August. Online: <http://www.col.org/colweb/site/pid/4042>. Retrieved 20 September 2006.
- Wiley, D. (2006). 'The current state of open education resources'. Paper prepared for OECD meeting. Online: <http://opencontent.org/blog/archives/247>. Retrieved 20 September 2006.

Biographical notes

Wayne Mackintosh joined the Commonwealth of Learning as Education Specialist, eLearning and ICT Policy in 2006. Formerly, he was founding director of the Centre for Flexible and Distance Learning at the University of Auckland, New Zealand.

Wayne has extensive experience in the theory and practice of open and distance learning. Prior to moving to New Zealand he spent 11 years working at the University of South Africa, a distance learning institution and one of the world's mega-universities.

He has participated in a range of international consultancies and projects including work for the International Monetary Fund, UNESCO and the World Bank. Wayne also serves as a member of the Editorial Board of Open Learning and publishes regularly in the field of flexible and distance learning.

A committed advocate of free/libre and open source software for education, Wayne was the project leader for the eLearning XHTML editor (eXe) project, funded by a grant from the Tertiary Education Commission of New Zealand.