

# Inspiring Educators as Contributors of Open Educational Resources (OER)

**Soon Fook Fong**

School of Educational Studies, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia  
E-mail: sffong@usm.my

**Fei Ping Por**

School of Educational Studies, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia  
E-mail: christinepor@yahoo.com

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## **Abstract**

Open Educational Resources (OER) are materials freely available in the public domain or released with an intellectual property license for educational purpose that allows free use, adaptation, and redistribution in any context in any country. In the digital age, the massive accessibility of technology to nearly everyone in all parts of the world provides a strategic opportunity to improve equity and quality in education, especially those in resource-poor environments. The OER open up the potential of educational resources for use and adaptation by everyone for sustainable learning. In order to balance protection for the authors' works while enabling their works to be shared, the Creative Commons (CC) licenses are structured. The CC licenses ensure the original content authors receive credit for their works they deserve while the general public is allowed to adapt the OER contents legally and flexibly. However, to promote OER contribution, one of the main enablers is the right technology tool to support OER content sharing, which are exemplified by Blendspace and Storify.

**Keywords:** free, Open Educational Resources, Creative Commons licenses, Blendspace, Storify

## **1. Background**

In the digital age, technology is reshaping every aspect of teaching and learning. The massive accessibility of technology to nearly everyone in all parts of the world has revolutionized different levels of education. Open Educational Resources (OER) are the teaching and learning transformation built upon the capacity of technology which move beyond conventional approaches that are highly promoted by the Commonwealth of Learning (COL) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) for sustainable learning. Dr. Wayne Mackintosh, the founding Director of the OER Foundation and the International Centre for Open Education, contended that education has finally returned to its core value with OER as knowledge can be shared freely (WikiEducator, 2014). Professor James C Taylor, Deputy Vice-Chancellor (Global Learning Services) and Chief Information Officer of University of Southern Queensland, Australia, emphasized OER movement is a simple but

powerful concept that the world's knowledge is a public good, and OER provide an unparalleled opportunity to increase access to knowledge and to share it, use it and reuse it (Taylor, 2007).

Open Educational Resources (OER) refer to “educational materials freely available in the public domain or released with an intellectual property license that allow for free use, adaptation, and redistribution” in any context in any country (Atkins, Brown, & Hammond, 2007). The examples of OER include research articles, textbooks, lecture notes, interactive mini-lessons, full university courses, learning objects, images, audio clips, videos, simulations about a specific topic, educational games, multimedia applications such as software, and any other resources that are designed for teaching and learning purpose. OER are permitted to be freely downloaded, edited, integrated with own ideas and printed out for educational purpose. The educators no longer need to put in redundant time, effort and energy to create total new materials from scratch as quality, freely-available resources already exist. There are collectively more than 260 Open CourseWare initiatives available (Mohamed Amin Embi, 2013) with more than 13,000 courses in 20 languages (Massachusetts Institute of Technology, 2014), and hundreds of open textbook portals, learning repositories, and other OER related sites opened for sharing, such as OER Commons, MERLOT, Udemy, YouTube, Scribd, Slideshare, Scoop.it, Issuu, Pinterest, Flickr, and Wikispaces.

For teaching and learning purpose, educators may mix the existing materials to create new resources, adapt the materials for multiple contexts, localise the materials to suit the needs, and/or translate the materials into other languages. OER can be augmented, edited, customized, aggregated and reformatted (Contact North | Contact Nord, 2014). All these practices extend the educators' mind and knowledge of a subject, and help in improving teaching quality as educators may repurpose the OER contents to adapt to the needs in real time. With OER development, educators are also given the possibility to engage with open communities for establishing more enriched professional networks. In this way, both the university's reputation and their personal reputation are enhanced. Besides, due to the absence of unnecessary duplication for OER, the cost of development is hence significantly reduced.

The “potential of opening up educational resources for reuse and adaptation by everyone” provides a strategic opportunity to improve equity and quality in education, especially those in “resource-poor environments” (UNESCO Institute for Information Technologies in Education, 2010). For instance, New Education Highway (NEH) launched in Myanmar leverages OER to provide remote and rural communities with access to a quality education (Jane Park, 2013). OER are an innovative approach to cheaply and effectively disseminate information and knowledge for the provision of free quality education to the bottom billion all over the world which generating equal learning opportunities for all around the world. OER contribute to “social inclusion, gender equity and special needs education” (UNESCO, 2012) with cost-efficiency and quality of teaching and learning outcomes. It is UNESCO's belief that “universal access to high quality education is the key to the building of peace, sustainable social and economic development, and intercultural dialogue” (UNESCO, 2014).

Acknowledging the benefits of sharing knowledge, in 2001, the Massachusetts Institute of Technology (MIT) took the lead to offer almost all of its courses online for free and open use. To officially introduce, adopt and appreciate this new concept, UNESCO organized the First

Global OER Forum in 2002 (UNESCO, 2014). Since then, the number of universities adopting OER with video lesson segments, embedded quizzes, immediate feedback and learner-paced learning is massively increasing, including Harvard, Yale, University of Michigan, University of Pennsylvania, and many more (Glennie, Harley, Butcher, and Wyk, 2012). In other words, students around the world are given the opportunity to freely attend Massive Open Online Courses (MOOCs) facilitated by renowned professors from reputable universities through Coursera, Stanford Online, edX, Udacity, Open2Study, and others.

As discussed by Mohamed Amin Embi (2013), effective distribution and use of OER in Malaysia are still very much in the early stage of implementation. The survey on Governments' Open Educational Resources (OER) Policies (Commonwealth of Learning, 2012) reported that Malaysia is in the process of developing plans. In truth, universities such as Open University Malaysia (OUM), Wawasan Open University (WOU), Universiti Sains Malaysia (USM), Universiti Teknologi Malaysia (UTM) and Universiti Malaya (UM) have made a concerted effort to develop and share OER with the rest of the world. For instance, Wawasan Open University (WOU) in Malaysia newly established the Institute of Research and Innovation (IRI) for continuing research in OER among Asian researchers and to develop Open CourseWare (OCW) on the continent. The online platform of OER Asia is designed and developed as an Asian forum to share information, views, research studies and resources. At Universiti Sains Malaysia (USM), the development and dissemination of OER to provide equitable access to knowledge and learning to the public have been given much emphasis. Lectures are recorded with a dedicated recording crew and equipment. The public is able to access the course materials 24/7 via the dedicated OER@USM platform managed by the Centre for Information, Knowledge and Information USM. Some selective course contents are also made possible on common video platforms such as YouTube, Vimeo, iTunes U, and others which make OER@USM more visible regionally and internationally.

## **2. Creative Commons Licensing**

In the past decades, in order to encourage learning and to protect the right of the authors, the traditional copyright law is enacted but this law has in fact limited the rights of the author as well as the printers. According to Dr. Rory McGreal (Contact North | Contact Nord, 2014), Contact North | Contact Nord Research Associate and the UNESCO/Commonwealth of Learning Chair in Open Educational Resources, there is no individual owns the creative works. Creations belong to public goods and no one has the right to monopolize them. Therefore, to support learning and promote sharing of knowledge while simultaneously retaining the right of the authors, Creative Commons (CC) licenses are structured upon copyright by Larry Lessig of Stanford University in 2001 and they are valid globally (Mohamed Amin Embi, 2013).

Unlike conventional copyrighted resources under 'all rights reserved' standard, OER encourages adaptability, such as "translating content into a local language, adapting content to specific learning needs, and connecting with collaborators at other institutions" (The Regents of the University of Michigan, 2011). In principle, OER is freely accessible and reusable under different licensing conditions. For legal use of reusing, repurposing, remixing and redistributing the OER contents, the six Creative Commons (CC) licenses which are more flexible and suitable licensing standard can be employed to protect rights while sharing the contributions legally to the world. The CC licenses balance protection for the authors' works while enabling them to be

shared (Architecture for Humanity, 2012). They “enable open content and collaboration, as well as acting as a database of open content” (Liang, 2004).

As highlighted in P2P Foundation (2012), the CC licenses define the right for the authors as below:

*Creative Commons licenses give the authors the ability to dictate how others may exercise their copyright rights, such as the right of others to copy their work, make derivative works or adaptations of their work, to distribute their work and/or make money from their work. They do not give the authors the ability to restrict anything that is otherwise permitted by exceptions or limitations to copyright, including, fair use or fair dealing nor do they give the authors the ability to control anything that is not protected by copyright law, such as facts and ideas.*

With the CC licensing, OER do not pose a threat to the rights of the authors but it ensures the original content authors receive credit for their works they deserve when they open their works for public use. Before publishing their works, the OER creators have to ensure the scope of the licenses cover their intended uses and understand how CC operate to meet their needs. If the work is used contrary to the license terms, the CC license will be terminated automatically meaning the OER creators no longer have the right to continue using the works (Architecture for Humanity, 2012). Under the CC licenses, the OER creators have to comply with its terms. A set of CC license conditions as illustrated in Figure 1 is structured to govern the general public use and redistribute of the works.

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 <p><b>Attribution Non-Commercial No Derivatives</b> <i>cc by-nc-nd</i></p> <p>This license is the most restrictive of our six main 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.</p>

Figure 1. Creative Commons Options

Adopted from Mohamed Amin Embi (2013, p. 17)

Since its launch in 2002, the popularity of CC licences has grown incrementally. The CC licensing standard provides aptly user-friendly open licences for the re-invention of digital materials in this digital age and avoids the automatically applied copyright restrictions. It is believed that the large free usable and sharable repository of information and content over the Internet are a prerequisite to sustain creativity, and there is an urgent need to proactively enrich this repository by creating a positive rights discourse. 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). Meanwhile, the CC licenses also serve to educate the public about issues of copyright and freedom of adapting resources.

### **3. Development of OER Using Blendspace and Storify**

To promote every educator in becoming active OER contributor instead of mere consumer, the following criteria are to be met – content experts, pedagogical-content-technology knowledge and platforms for synchronous and asynchronous communications (Por and Fong, 2011). There are many content experts in both the local and international institutions who will become global players as OER contributors. With very short trainings, design of pedagogical-content-technology knowledge can be mastered by content experts. However, it is a great challenge for educators, especially for newcomers to OER, to browse among the countless OER sites around the world to find relevant learning objects. The main enabler is the right platform for finding, creating and sharing OER to the world. Therefore, the examples discussed here are Blendspace available at <https://www.blendspace.com/> and Storify available at <https://storify.com/> .

Blendspace is a web-based tool that allows users to aggregate OER from all over the web for easy allocation of relevant resources to be shared with others. The layout is user-friendly as users are only required to create their OER by uploading, dragging and dropping the digital resources from the computer and even from across the web (such as YouTube, DropBox, Google Docs, Flickr) into the grid. Each resource is shown in the order as intended and is played sequentially when users access the page. The users may also add comments on any of the resource pages. Besides, Blendspace can also be shared as a slideshow or a printable handout with full text and audio commenting (Blendspace, 2014). Blendspace has gained worldwide popularity and has been used by many professionals to share their works for non-commercial purpose.

Similarly, Storify is the real-time curation and commenting platform that connects with social media sites, such as Twitter, Facebook and Instagram. Users can easily drag and drop social media content, tweets, documents, photos and videos in, and they will be embedded instantly. For example, users may just drag any tweet relevant to the discussion to the page and add in their comments. Moreover, sources of the original links are automatically generated in Storify. The design of the page can also be easily customized by the users to make their content more engaging and suit to their unique styles (Storify, 2014). No specific technical programming knowledge is required to perform all these tasks.

The two figures below illustrate the learning modules created by Prof. Dr. Fong Soon Fook who specialized in Multimedia Education, in training his students to use Blendspace and Storify for teaching and learning purpose. Learning objectives, lessons and online quizzes created using ProProfs (available at <http://www.proprofs.com/>) are structured orderly according to the context. Gagne's Nine Events of Instruction is followed to provide a framework for an effective learning process.



Figure 2. Example of Blendspace for OER



Figure 3. Example of Storify for OER

#### 4. Conclusion

With the inherent value of freely available knowledge resources and the freedom from licensing encumbrances, OER create great synergies for equitable access to knowledge and learning, which benefit especially the poor and marginalised populations. To realise the full potential of OER, the use of right technology tools is also one of the main considerations to support sharing of content among specific community. OER do not automatically lead to quality, efficiency and cost-effectiveness. The transformative educational potential of OER depends on the effective

use of technology tools. It is aimed to enable educators to become active global contributors of OER instead of mere consumers of OER. The OER concept builds capacity for engagement based on mutual benefit between people and institutions between and within developed and developing regions leading to enhancing educational collaboration in the region for the purposes of sharing curriculum, learning materials, learning tools and delivery strategies.

## References

- Architecture for Humanity. (2012). Creative Commons Licensing. Retrieved October 20, 2014, from <http://openarchitecturenetwork.org/licensing>
- Atkins, D. E., Brown, J. S., & Hammond, A. L. (2007, February). A review of the open educational resources (OER) movement: Achievements, challenges, and new opportunities. Retrieved October 25, 2014, from <http://tinyurl.com/yw4j4u>
- Blendspace. (2014). Create lessons in 5 minutes. Retrieved October 17, 2014, from <https://www.blendspace.com/>
- Contact North | Contact Nord. (2014). Open Educational Resources (OER) - A Video Primer. Retrieved October 25, 2014, from <http://contactnorth.ca/tips-tools/open-educational-resources/videos>
- Dhanarajan, G., & Porter, D. (Eds.). (2013). *Open Educational Resources: An Asian Perspective*. Vancouver: Commonwealth of Learning and OER Asia.
- Glennie, J., Harley, K., Butcher, N., & Wyk, T. v. (Eds.). (2012). *Open Educational Resources and Change in Higher Education: Reflections from Practice*. Vancouver: Commonwealth of Learning.
- Hofman, J., & West, P. (2008). Chapter 6: Open Licences. In *Copyright for authors, educators and librarians*. Retrieved October 20, 2014, from [www.col.org/resources/knowServices/copyright/Pages/openLicense.aspx](http://www.col.org/resources/knowServices/copyright/Pages/openLicense.aspx)
- Jane Park. (2013). New Education Highway uses OER to make education accessible in Myanmar. Retrieved October 20, 2014, from <https://creativecommons.org/weblog/entry/38971>
- Liang, L. (2004). *Guide to Open Content Licenses*. Piet Zwart Institute: Willem dr Kooning Academy Hogeschool Rotterdam.
- Massachusetts Institute of Technology. (2014). About the OpenCourseWare Consortium. Retrieved October 20, 2014, from <http://ocw.mit.edu/about/ocw-consortium/>
- Mohamed Amin Embi. (Ed.). (2013). *Open Educational Resources in Malaysian Higher Learning Institutions*. Malaysia: Centre For Academic Advancement, Universiti Kebangsaan Malaysia and Department of Higher Education, Ministry of Higher Education.
- P2P Foundation. (2012). Creative Commons. Retrieved October 17, 2014, from [http://p2pfoundation.net/Creative\\_Commons](http://p2pfoundation.net/Creative_Commons)
- Por, F. P., & Fong, S. F. (2011). Exploring the Innovative Multimedia Pronunciation Learning Management System on Students with Different Psychological Profiles. *International Journal of Business and Social Science*, 2(24) [Special Issue], 244-250.
- Storify. (2014). Over Two Million Stories, Dozens of Purposes. Retrieved October 17, 2014 from <https://storify.com/>
- Taylor, J. C. (2007). Open Courseware Futures: Creating a Parallel Universe. Retrieved October 20, 2014, from [http://www.ascilite.org.au/ajet/e-jist/docs/vol10\\_no1/papers/full\\_papers/taylorj.htm](http://www.ascilite.org.au/ajet/e-jist/docs/vol10_no1/papers/full_papers/taylorj.htm)

- The Regents of the University of Michigan. (2011). Open Educational Resources: Benefits for Faculty and Students. Retrieved October 20, 2014, from <http://open.umich.edu/sites/default/files/3659/PDFs/OER-benefits-handout.pdf>
- UNESCO (2012). 2012 Paris OER Declaration. World OER Congress, Paris, June 2012. Retrieved October 25, 2014, from [http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration\\_01.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration_01.pdf)
- UNESCO (2014). Open Educational Resources. Retrieved October 25, 2014, from <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/>
- UNESCO Institute for Information Technologies in Education. (2010). Medium-Term Strategy 2008-2013. Moscow: Russian Federation.
- WikiEducator. (2014). Formal biography: Wayne Mackintosh. Retrieved October 25, 2014, from <http://wikieducator.org/User:Mackiwg>