

Creative Commons Use in the International Education Market
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Introduction

This paper will analyze the impact of Creative Commons copyright licenses on the international education market. Following background information on the types of Creative Commons licenses available and how the system differs from traditional copyright, their use in the international education market will be explored. Thereafter, beneficial and negative effects of the system and impediments to use will be discussed, along with a comparison of the international education market under traditional copyright versus the Creative Commons system. The discussion will lead to conclusions as to how beneficial the Creative Commons system is to the international education market.

Discussion

I. Background

A. Creative Commons:

The California-based nonprofit Creative Commons Corporation was founded in 2001 by Stanford law professor Lawrence Lessig and colleagues for the purpose of creating copyright licenses that would permit copyright holders to designate their works for sharing in ways that copyright law did not ordinarily permit. First released in December of 2002, the six types of licenses and a seventh full relinquishment of rights, offer Creative Commons' users choices in designating the shareability of their works. As founder Lawrence Lessig explained in a 2011 interview in WIPO Magazine, "it is a 'some rights reserved' model whereby certain rights are reserved by the copyright owner and others are released to the public."¹ Its mission states, "Creative Commons develops, supports, and stewards legal and technical infrastructure that

maximizes digital creativity, sharing, and innovation.”² Its existence is aligned with the rapid growth and pervasive existence of the internet, and designed to allow sharing of vast amounts of knowledge in what continues to evolve as a sharing economy.³

Presently at version 4.0, the six licenses and one hybrid designation/license are: Attribution, Attribution–ShareAlike, Attribution–NoDerivs, Attribution–NonCommercial, Attribution–Noncommercial-ShareAlike, Attribution–NonCommercial–NoDerivs, and the CC0 designation.⁴ Each of the seven has a three-layer design to facilitate ease of use and access.⁵ The first layer is the legal code, written in typical legal license language. The second layer is called the “Commons Deed” and is a layperson recount of the license. The third layer is a computer readable version, including a summary of the key provisions of the particular license, written in the standardized Creative Commons Rights Expression Language (“CC REL” for short), so that materials with any Creative Commons (“CC”) licenses can be easily found through various internet search engines. A license chooser computer program assists with a user’s choice of license.⁶ Creative Commons license designations are non-exclusive, and may be combined with other licensing designations.⁷ They are also irrevocable, so not to be considered lightly.⁸

The first three allow commercial use of the underlying works. The Attribution license is the most open, permitting others to “distribute, remix, tweak, and build upon” the work, provided the users credit the author for the original work.⁹ The Attribution–ShareAlike license lets others “remix, tweak, and build upon” the original work, provided they credit the author as well as license derivative works under the same license.¹⁰ The Attribution-NoDerivs license allows the user to redistribute in total, without any revisions.¹¹ The other three licenses require uses to be non-commercial. The Attribution-NonCommercial license permits users to “remix, tweak, and build upon” the original work upon acknowledgment of the author, permitting new works to be licensed

on any terms.¹² The Attribution-NonCommercial-ShareAlike license is similar to the Attribution-NonCommercial, except that it requires users to license their new works under the same license.¹³ The most restrictive, Attribution-NonCommercial-NoDerivs, only permits unaltered non-commercial re-use, with credit to the author.¹⁴ The CC0 provision applies to a work to dedicate it to the public domain with a waiver of all of the author's copyright entitlements under various jurisdictions' laws.¹⁵ It also acts to disclaim all of the author's warranties and liabilities to the extent allowed under the law.¹⁶ Where a jurisdiction's copyright regime does not allow CC0 to completely place a work in the public domain, CC0 will default to apply a license that attempts to achieve the same public-use purpose, granting any type of use, anywhere, for any purpose whatsoever.¹⁷

This Creative Commons system is available internationally through its affiliate network which includes more than 100 affiliates in 80+ jurisdictions throughout the world.¹⁸ Through agreements, the affiliates act as liaisons between the Creative Commons' headquarters and local organizations, universities and individuals, to conduct research, public outreach, community building and translations, and offer support to users. While the current version 4.0 has been written to be applicable to most jurisdictions, prior versions were translated into over fifty localized versions, differing only to reflect local protocol for expression and format.¹⁹ Regional coordinators, who support Creative Commons communities in their regions, exist for Africa, Asia-Pacific, Europe, Latin America and the Middle East²⁰

B. General Copyright Principles:

Traditional copyright law, on the other hand, is based on the national laws of the author's country, with similar laws for many through compliance with the Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention.²¹ The

commonly understood purpose of those laws is to promote creative expression through monetary and reputational incentives.²² This is done by automatically granting to an original literary, musical, film, software, painting or other similarly expressive work, certain economic and moral protections upon creation.²³ These protections include the author's economic right to reproduce the work in copies or phonorecords; publicly distribute copies or phonorecords; create derivative works; publicly perform the work; publicly display the work; and, for sound recordings, publicly perform the work by means of a digital audio transmission.²⁴ They also include the author's moral rights to be identified as the author, maintain the work's integrity, and right of first publication.²⁵ Without either specific permission, licensing through a collective or compulsory licensing scheme, or a fair use privilege, using an author's or copyright owner's rights in his, her or its copyrighted work is an infringement for which both equitable and legal remedies and criminal sanctions may be imposed.²⁶

Originals or used copies of various course materials are sold through typical retail channels like brick-and-mortar book stores and online vendors like Amazon, with each user needing to purchase the appropriate permissions for ownership and use. Coursepacks, a collection of materials individually selected by an instructor, are typically licensed through a Reproduction Rights Organization, aligned with the International Federation of Reproduction Rights Organizations to provide a collective licensing process for fairly consistent mechanisms throughout the world to "protect and enable easy legal access to copyright material."²⁷ Compulsory licenses are typically not available for educational material in either developed or developing countries.²⁸ Fair use by educators and librarians, explained in the US Copyright Office's Circular 21,²⁹ has limited application in education. The educational purposes recognized under fair use include limited noncommercial instruction at nonprofit educational institutions,

limited noncommercial study or investigation intended to contribute to a field of knowledge, or the presentation of research findings at noncommercial peer conferences, workshops, or seminars.³⁰ Moreover, the permissible reproductions of literature, music and television programs for educational purposes are very constrained in terms of quantity and number, making this form of information sharing only suited to incidental items of study.³¹ Fair use could not begin to provide a basis for the provision of learning materials in any long-term educational setting.³²

C. The Vision of Creative Commons:

CC's vision reflects the principles of global access to research and education, stating, "Our vision is nothing less than realizing the full potential of the Internet—universal access to research and education, full participation in culture, to drive a new era of development, growth, and productivity."³³ Launched by Stanford University Professor Lawrence Lessig and others, its goals included helping "artists and authors give others the freedom to build upon their creativity—without calling a lawyer first."³⁴

Facilitated through the internet, Creative Commons licenses function as intermediaries, creating a method for end-to-end sharing. They do this by attaching machine readable code identifying works subject to the Creative Commons licenses, and also granting permissions for greater access to the use, copying and distribution of the works.³⁵ At the same time, they enable other new intermediaries, one of which is the evolving open educational community. (*See* Section II, *infra*.) Through use of the Creative Commons licenses, numerous higher education institutions are creating free, electronic public learning communities available world-wide through the internet. (*See* Section II, *infra*.) The practical applications include not only licensing of straight academic textual information, but also of digital media, involving video, film and music, including for remixing and teaching students how to be literate in these media.³⁶ This large paradigm shift

permits the dissemination of social leveling education, in the form text books, articles, and how-to lessons, both in formalized courses and incremental modular segments, far beyond the campuses of educational institutions.

II. Creative Commons Uses in Education

Although begun earlier in Germany,³⁷ two of the first higher education institutions to fully embrace, foster and grow a Commons learning environment were Massachusetts Institute of Technology (“MIT”) and Rice University, which began their programs in 2002 and 1999, respectively.³⁸ Other early users were Yale, Utah State University, Stanford University, Princeton University, University of Michigan, University of California, Berkeley.³⁹ MIT’s OpenCourseWare, which draws on MIT’s tradition of open sharing begun in the 1950’s,⁴⁰ is a free, public educational resource available to faculty and students world-wide through an internet connection.⁴¹ Its guiding principles are: (1) to provide free and open digital copies of sound educational materials organized as courses, (2) to permit noncommercial use and adaptation under open licenses, predominantly Creative Commons licenses, and (3) to limit certification programs and faculty access.⁴² Currently it offers nearly 2,300 published courses from 38 departments, virtually the entire MIT curriculum, contributed voluntarily by MIT professors, and has been accessed by 175 million people, from every single country.⁴³ It is even undergoing efforts to make the materials accessible to those with disabilities, with the addition of subtitles to newly added audio and video materials as well as retrofitting of some of the older material; 60 percent of its full video lectures already have complete instructor subtitles.⁴⁴ Its \$3.5 million annual budget is about half-funded by MIT, with the balance of funding from individuals and a myriad of sponsors including foundations, individuals and large corporate sponsors, and in-kind contributors.⁴⁵ This budget supports its production costs, licensing costs, and staff, 12 of whom are devoted to

publication and spend nearly 90 hours, in addition to 10 hours of faculty time, required to complete preparations for each online course.⁴⁶

In 2012, based on the success of MIT and other early free online higher education programs, MIT and Harvard University launched edX, a large, public online course platform for various online university courses.⁴⁷ Courses through this program include those for which academic credit or certification is offered.⁴⁸ The course materials are completely open, encouraging interaction among teachers and students alike.⁴⁹

With MIT's unfailing support for OpenCourseWare ("OCW") in general, the platform has also been embraced by other universities around the world dedicated to open education, including 80 universities⁵⁰ in 49 countries⁵¹, through the Open Education Consortium ("OEC").⁵² Its courses can also be found through the educational institutions' websites or through the Open Learning Portfolio, which additionally stores and provides access to more than 30,000 courses from 280 providers, including educational institutions, educators, and affiliated organizations.⁵³ Some of those institutions include Johns Hopkins Bloomberg School of Public Health, Tufts University, University of Michigan, University of California, Irvine, University of Barcelona, Paris Tech and Helsinki Metropolitan University of Applied Sciences. The course materials for all courses are for the most part dependent on the Creative Commons Attribution 4.0 license.⁵⁴ The focus of the Consortium is to provide access to high quality education and training in a shared and collaborative manner, to every single person, from wherever he or she sits in the world.⁵⁵ By leveraging the power of the internet, its mission includes providing the essential tools of education to each individual so that society's challenges can be solved. Its efforts are supported by The William and Flora Hewlett Foundation and sustaining membership of 18 universities, including MIT and the

majority of those listed above.⁵⁶ In keeping with the spirit of the Creative Commons licenses, OEC makes sure that “[e]ducation is available, accessible, modifiable and free.”⁵⁷

Rice University’s program, known as OpenStax CNX (formerly Connexions), presents information in learning modules which can be linked into courses or followed based on topical relationships. The program’s materials are based on the Creative Commons Attribution license; and, by 2005, the program already reported that ““more than one million people from 157 countries [had tapped] into over 2,500 modules and almost 100 courses developed by a worldwide community of authors in fields ranging from computer science to music and from mathematics to biodiversity.””⁵⁸ Connexions includes another feature that is facilitated through Commons licenses. It permits quality control review by outsiders which provides assessments and ratings.⁵⁹ Many courses are translated into other languages.⁶⁰ Thus, this model as well is intent on community-building.⁶¹

A program initiated by OpenStax CNX is Rice University’s 2012-launched nonprofit OpenStax College, which offers free, peer-reviewed online textbooks (as opposed to CNX’ modular materials) under the Creative Commons Attribution license, reaching to date more than 540,000 students in connection with more than 2,000 courses taught worldwide.⁶² It presently offers 15 college course titles and will add College Board Advanced Placement texts over the next year.⁶³ OpenStax acts as a role model for open educational resources, demonstrating a powerful means for sharing knowledge throughout the global society.⁶⁴ Use of OpenStax text books has grown six-fold in the last two years, and has already exceeded its goal of saving college students \$120 million per year.⁶⁵ Making access easy, OpenStax has partnered with various online platforms and distributors for ease of access, allowing website pdf viewing, and in many cases

note taking and highlighting.⁶⁶ Funding is provided by Rice University, individual and corporate donors, and several foundations.⁶⁷

Berklee Shares is a less traditional educational user of the Commons licenses in that it facilitates the study of music. It offers for free under Creative Commons licenses to all corners of the world a sampling of its regular music lessons in guitar, songwriting, music theory, orchestration and jazz, among others, while at the same time intentionally promoting what it offers on a commercial basis.⁶⁸ Some of the Creative Commons-based course offerings include guitar, music production, music business, songwriting, music theory, jazz and orchestra.⁶⁹

Another example for purposes of this paper is that of the Open Course Library (“OCL”), funded by the Washington State Legislature and the Bill & Melinda Gates Foundation, and run by the Washington State Board for Community and Technical Colleges.⁷⁰ OCL is a publicly available collection of course materials, including readings, assessments, syllabi and activities, created by college faculty, course designers, librarians and other similar experts, designed to be used by others under the Creative Commons Attribution license.⁷¹ Its goal is to decrease course material costs for students (most materials are free, but some have minimal associated costs) and provide high quality, adaptable resources to both on-line and in-classroom faculty who can pick and choose specific offerings or adopt an entire course literature for their classes.⁷² OCL requests but does not require that materials generated through adoption of OCL literature be licensed similarly as an open educational resource under the Creative Commons Attribution license.⁷³

A final example is that of the Internet Library, a 501(c)(3) corporation whose purpose is to build a digital internet library which offers “permanent access for researchers historians, scholars, people with disabilities and the general public to historical collections.”⁷⁴ It began in 1996 with somewhat limited donations, but now includes texts, audio, movies and software, along with

services to adapt the materials to persons with sight and other disabilities.⁷⁵ It offers materials under many different types of usage rights, but Creative Commons licensing is specified and prominent among them.⁷⁶ In fact, Creative Commons established CC Publisher, a user-friendly software utilizing a drag-and-drop method for marking content with a Creative Commons license easily publishable on the Internet Library website.⁷⁷

III. World-wide Impact of Creative Commons on Education

A. MIT Evaluation:

MIT conducted its own OpenCourseWare evaluations for 2005 and published its findings in its *2005 Program Evaluations Findings Report* (“Findings Report”).⁷⁸ In that study MIT evaluated the demographic, geographic and technical profiles of those accessing the site; user’s educational goals, correlating material and success levels; and the impact on user’s educational experiences and the sites’ effect on educational practices worldwide.⁷⁹ The evaluations from this world-wide leader in open education can be extrapolated across many of the online educational resources employing the Creative Commons licenses. The findings have determined in general that, with some 175 million OCW visitors and over 2,260 OCW courses presently,⁸⁰ with users and materials of many of the ten translation affiliates and over 70 mirror sites potentially doubling world-wide access, with other open educational resources,⁸¹ and, finally, annual user increases above 50 percent,⁸² instructors, students and self-learners the world-over report positive impacts in their lives.⁸³ Among these are supplementation of educator teaching materials, enrichment of students’ existing course work, and informal study for persons before, during and after formal educational programs, including professional skills and knowledge augmentation. Self-learners made up about 50 percent, students made up about 30 percent, and educators made up about 15 percent of the 2005 users, who, overall, report high satisfaction with the types and quality of

materials available, from scholarly input, peer review, and frequent updates to materials available.⁸⁴ Significantly, OCW invites publication by all of the institutions involved of each of their own materials.⁸⁵ Printed and audio-visual materials are also available.⁸⁶

B. Benefits Generally:

Formalized in 2002, “Open Educational Resources” was first expressed as a term to describe the methodology for free and collaborative educational content at that year’s Forum on the Impact of Open Courseware for Higher Education in Developing Countries sponsored by UNESCO.⁸⁷ MIT’s OCW is clearly a proven fundamental and important model fostering this movement, providing critical tools and implementation resources. Also essential to these efforts are the licensing tools provided by Creative Commons. In fact, numerous integral and supportive foundations to the various open education platforms discussed herein, like the Ford Foundation, the William and Flora Hewlett Foundation, and the Bill and Melinda Gates Foundation, require any grant recipient to release works under Creative Commons licenses to allow reuse and adaptation.⁸⁸ Most often through the Attribution license or the Attribution-Noncommercial-ShareAlike license, vast intellectual property has become available to the millions accessing various open education teaching tools each day.⁸⁹ Moreover, for the most part, this material remains available for adaptation, collaboration and continual refinement. Additionally, the Creative Commons licenses include computer code making documents licensed thereunder easily discoverable through internet search functions.⁹⁰ Thus, access to resources beyond organized open educational materials is possible.

One of the proven beneficial results of the Creative Commons license usage throughout open education is the educator’s common practice of adopting or adapting content, including combining it with other content or adapting it for relevant course structure and content.⁹¹ Through

continued online publishing as well, the quality and timeliness of the materials are improved and maintained. Many of the numerous open education resources proudly offer and encourage modification of materials provided for personalization on behalf of individuals, large and diverse audiences, or any other combinations that come together for personal and community enrichment toward overall improved social well-being.⁹² Some of the reasons behind the adaptations include making the material appropriate for the level of students, updating the content, make technical adaptations for use, or fitting the material to the specific culture of use.⁹³ This type of “living document” is precisely what the CC licenses enable (with the exception of the No Derivations license).⁹⁴

C. The leveling function - Access to Education by All:

OCW and OER materials are used and distributed to students in both printed and electronic versions (including on computers and mobile applications), permitting use by the learning population both with and without access to technology.⁹⁵ In fact approximately 20 percent download content specifically to distribute to those who lack internet access.⁹⁶ Fundamental to global access as well are the vast translations that occur. At an online forum on OER sponsored by the United Nations Educational, Scientific and Cultural Organization (“UNESCO”) and its International Institute for Educational Planning, such translation of OER materials was recognized as an effective catalyst for developing-country educators to create original OER material in their own language as well as share with others their unique approaches to teaching and learning. This freedom to both reproduce and translate is also dependent on the Creative Commons licenses which permit these activities.⁹⁷

Uses by developing nations are critical to their transformation into developed nations. Some of these areas include countries in East Asia, Western Europe, South Asia, Latin America

and other regions. At the time of the Findings Report, translation affiliate agreements existed with four universities to translate courses into Spanish, Chinese, simplified Chinese, traditional Chinese and Thai. In fact, during the 2005 evaluation period, OCW use increased most dramatically, 170 percent, on the sites of the translation affiliates. At the time of the 2005 study alone, more than 16,000 volunteer translators from around the world were working to translate the MIT OCW course material to Traditional Chinese, thus signifying the importance of this internationalization within the OER/OCW systems. Also demonstrating the vast global reach of open education is the housing of mirror sites established for the purpose of overcoming local bandwidth constraints in numerous other developing countries, including developing nations Bangladesh, Brazil, China, Ghana, Indonesia, Mauritius, Nigeria, Pakistan, Sri Lanka and Uganda. Interestingly, economics and democracy were the two most searched topics in 2004, with communication, computer and math not far behind.⁹⁸ Obviously great political ramifications are inherent in open learning, where knowledge is educating users to become more productive and socially aware. Accordingly, Creative Commons provides a bridge to a world-wide educated populous.

Regarding the impactful political ramifications of open educational resources, where previously a person's or group's economic position and access to political power were large determinants in their abilities to impact politics, culture and the marketplace, and they, in turn, resulted from one's access to higher education, now individuals and remote groups have the means by which to educate and organize themselves around ideas affecting social good.⁹⁹ And through rapid feedback mechanisms built into much of the open education materials, the information can stay up to date and relevant to present needs.

Another very positive use for open education under Creative Commons licensing is for health education. An example of this is the 2010 collaboration by two universities in Ghana with

educators in Africa and North America to produce health science material including clinical demonstration images, animations, narrated videos, interactive case studies and testing materials, all while keeping costs to a minimum.¹⁰⁰

D. Developed Nation Use:

Developed nation use in 2005 was approximately 43 percent in North America, 21 percent in Western Europe, and 15 percent from East Asia;¹⁰¹ however, with the intense use increases seen in developing nations during that year, the proportion of developed to developing nation use has likely diminished. In developed nations, while educational instructor and student access is strong, substantial self-study access is from commercial entities and the US military, including particularly high usage from the U.S. Navy, Boeing, Intel, Ratheon, Motorola and Microsoft domains.¹⁰² Reach beyond centralized OER materials exists as well. For example, New Zealand initiatives include a campaign to promote Creative Commons licensing for school teachers' works; a digital access and discovery project by the National Library of New Zealand, and free university learning opportunities, some of which grant formal credit. Japan, which has not as a nation undertaken an OER policy, has an Open Courseware Consortium. And Finland has established the Finnish Association for Open Educational Resources to increase recognition and adoption of open education in Finland, also based on Creative Commons licensing.

E. Drawbacks:

While perhaps not so much the case for the materials provided by the many well-established higher education institutions, because of their time-tested ability to provide high quality education, quality control is a problem for materials at-large on the OER system which may come from other places. Findings show that some OER resources are unable to provide

information in a valuable manner.¹⁰³ Additionally, not all resources have built-in feedback mechanisms, thus preventing their improvement where potentially needed.

Use of creative commons licenses for educational purposes thrives in large part because of the support of non-profit organizations (“NPO”), especially foundations which provide vast amounts of financial support for virtually all of the open educational systems.¹⁰⁴ While some of the institutions aligned with OCW and OER are private, the vast knowledge available under the Commons licenses in connection with these institutions is materially supported by the NPO’s and foundations. Fortunately, the NPOs are particularly well suited to the commons environment, especially providing the infrastructure to promote free world-wide access to education.¹⁰⁵ But there is not any for-profit model which supports the OCW or OER systems, potentially limiting its sustainability.

F. Impediments to Scheme:

US Copyright termination rights are a potentially un-ripe issue for Creative Commons license assignments under U.S. law, as they give an author or specified heirs the right to terminate the grant of a license like those of the Creative Commons at a time which is between 35 and 40 years from the date of grant,¹⁰⁶ and that 35 years has not passed since the 2002 introduction of the Creative Commons licenses. Although there are ways around the reversion rights, like future grants or judge-made equitable policies, this uncertainty leaves much at stake when this 35-year period first becomes applicable to Commons licenses, perhaps necessitating legislative fixes.¹⁰⁷

Additionally, contradictory, confusing, overlapping CC licenses can be problematic. For straight access and use purposes, any of the Creative Commons licenses should work for education. On the other hand, where adaptation and repurposing occurs, licenses other than the “by” license will present varying restrictions for users. Likely the vast number of users will be unfamiliar with

all the nuances of the various licenses, and also combine materials under different licenses, potentially causing borrowed works under one license to be subject to another, leaving any particular work's rights uncertain.

Enforcement of these licenses is also an open matter, and inevitably more of the licensing rights and consequences will end up subject to litigation, potentially complex due to a vast set of international laws and tribunals which might weigh in as arbiters. There is very little legal precedent for the enforcement schemes of CC licenses; only nine disputes are presently recognized on the Creative Commons website.¹⁰⁸ A US court has analyzed enforcement under traditional copyright law,¹⁰⁹ while German, Belgium and Dutch courts have upheld addressed CC license provisions under breach of contract claims.¹¹⁰ Both copyright and contract law are potential avenues for rights enforcement in the future; thus, depending on the paths followed by the respective tribunals, varying results may lead to uncertainties in the enforceable rights available to a CC licensor.

IV. Comparison of Traditional Copyright and Creative Commons within Education

“While the purpose of the copyright system has always been to promote the creativity in society,¹¹¹ it has the limiting function of preventing access to the means by which creativity comes to be, education, because the rights of copyright holders in teaching materials act as an economic barrier to access for many. Not only is access to educational material itself very limited by standard intellectual property rights; so too is the revision, remixing and redistribution of works quite limited by typical intellectual property rights.¹¹² This is unpreventable, as copyright attaches to original creative works automatically, upon their being fixed in a tangible medium of expression.¹¹³ Thus, traditional copyright limits education to those who can purchase materials to support learning either through self-study or organized instruction.

On the other hand, Creative Commons, the aim of which includes rebuilding a public domain¹¹⁴ and increasing easily accessible raw source materials for use in new creative works,¹¹⁵ has provided education for hundreds of millions, including many who would not ordinarily have had access to education. It has done this by fostering a community where the essential component to instruction, guidance through published materials, can be reproduced and distributed free of charge.¹¹⁶ Important to its mission, it has also created functionality for retrieval of resources under the Creative Commons licenses, by including CC Rel computer code for easy identification through internet search engines.

Conclusion

Creative Commons licensing of intellectual property has been and continues to be instrumental in creating a rapid, world-wide blending of formal and informal learning, and of traditional educational activities and broader cultural activities, as well as an exponentially expanded reach.¹¹⁷ Clearly these striking impacts could not happen if left strictly to traditional copyright laws. Creative Commons' main benefits can be summarized as substantially increasing the global population's access to relevant, quality educational resources, fostering a far-greater collaborative educational environment, and providing a means by which educational resources and creation continue to advance and improve.¹¹⁸ CC's open approach to information sharing and education blends the efficiencies and global reach of the internet to provide wisdom to millions more individuals in many more nations than would have access under standard international copyright laws. In these ways a revolutionary paradigm shift is occurring.

¹ Interview by WIPO Magazine with Lawrence Lessig, Professor, Stanford University, Founder, Creative Commons Project, WIPO Magazine, January, 2011, available at http://www.wipo.int/wipo_magazine/en/2011/01/article_0002.html.

² Creative Commons, About CC, <https://creativecommons.org/about> (last visited Dec.7, 2015).

³ Supra note 1.

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- ⁴ Creative Commons, About the Licenses, <https://creativecommons.org/licenses/> (last visited Dec. 7, 2015)
- ⁵ Id.
- ⁶ Creative Commons, License Chooser, <http://creativecommons.org/choose/> (last visited Dec. 8, 2015).
- ⁷ Supra note 4.
- ⁸ Supra note 4; but, as to irrevocability, compare Section II, F, *infra*, regarding termination rights.
- ⁹ Supra note 4.
- ¹⁰ Id.
- ¹¹ Id.
- ¹² Id.
- ¹³ Id.
- ¹⁴ Creative Commons, About CC0—“No Rights Reserved”, <https://creativecommons.org/about/cc0> (last visited Dec. 8, 2015).
- ¹⁵ Id.
- ¹⁶ Id.
- ¹⁷ Id.
- ¹⁸ Creative Commons, CC Affiliate Network, https://wiki.creativecommons.org/wiki/CC_Affiliate_Network (last visited Nov. 18, 2015).
- ¹⁹ Id.
- ²⁰ Creative Commons, Regional Coordinators, https://wiki.creativecommons.org/wiki/Regional_Coordinators (last visited Nov. 18, 2015).
- ²¹ U.S. Copyright Office, Library of Congress, Fact Sheet 100, International Copyright (04/2015).
- ²² U.S. Copyright Office, Library of Congress, Circular 21, Reproduction of Copyrighted Works by Educators and Librarians (8/2014) (“Circular 21”).
- ²³ 17 U.S.C. §§ 102, 106 and 106A.
- ²⁴ 17 U.S.C. § 106.
- ²⁵ 17 U.S.C. § 106A. See, also, Rights Direct, International Copyright Basics, <http://www.rightsdirect.com/international-copyright-basics/> (last visited Nov. 18, 2015).
- ²⁶ See 17 U.S.C. §§ 501-512.
- ²⁷ International Federation of Reproduction Rights Organisations, <http://www.ifrro.org/> (last visited Nov. 18, 2015).
- ²⁸ Susan Isiko Strba, International Copyright Law and Access to Education in Developing countries/Exploring Multilateral Legal and Quasi-Legal Solutions (2012), pp. 205-206.
- ²⁹ Circular 21; 17 U.S.C. § 107.
- ³⁰ Stanford University Libraries, Copyright & Fair Use, Educational Uses of Non-coursepack Materials, <http://fairuse.stanford.edu/overview/academic-and-educational-permissions/non-coursepack/> (last visited Nov. 18, 2015); 17 U.S.C. § 110; see also Circular 21.
- ³¹ Supra note 30.
- ³² Supra note 30.
- ³³ Creative Commons, About CC, <https://creativecommons.org/about> (last visited Nov. 18, 2015).
- ³⁴ Lydia Pallas Loren, Article: Building a Reliable Semicommons of Creative Works: Enforcement of Creative Commons Licenses and Limited Abandonment of Copyright, 14 Geo. Mason L. Rev. 271, 285 (citations omitted).
- ³⁵ Michael W. Carroll, Symposium: Whither the Middleman: The Role and Future of Intermediaries in Information Age: Creative Commons and the New Intermediaries, 2006 Mich. St. L. Rev. 45, 47.
- ³⁶ Supra note 1.
- ³⁷ Wikipedia, OpenCourseWare, <https://en.wikipedia.org/wiki/OpenCourseWare> (last visited Nov 22, 2015).
- ³⁸ Id.; Openstax, About Us, <https://cnx.org/about> (last visited Dec. 7, 2015).
- ³⁹ Supra note 37.
- ⁴⁰ Massachusetts Institute of Technology, MIT Open Courseware, President’s Message, <http://ocw.mit.edu/about/presidents-message/> (last visited Nov. 22, 2015).
- ⁴¹ Supra note 35 p. 57.
- ⁴² Wikipedia, Open Courseware Principles, <https://en.wikipedia.org/wiki/OpenCourseWare#Principles> (last visited Nov. 22, 2015); Massachusetts Institute of Technology, MIT Open Courseware, <http://ocw.mit.edu/index.htm>, (last visited Nov. 22, 2015).
- ⁴³ Massachusetts Institute of Technology, MIT Open Courseware, *Dashboard Report: September 2015*, http://ocw.mit.edu/about/site-statistics/monthly-reports/MITOCW_DB_2015_09.pdf; supra note 27.

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- ⁴⁴ Massachusetts Institute of Technology, MIT Open Courseware, About OCW, Director Letter, <http://ocw.mit.edu/about/director-letter/> (last visited Nov. 22, 2015).
- ⁴⁵ Massachusetts Institute of Technology, MIT Open Courseware, Donate, Why Donate?, <http://ocw.mit.edu/donate/why-donate/> (last visited Nov. 22, 2015); Massachusetts Institute of Technology, MIT Open Courseware, Donate, Our Supporters, <http://ocw.mit.edu/donate/our-supporters/> (last visited Nov. 22, 2015).
- ⁴⁶ Massachusetts Institute of Technology, MIT Open Courseware, Donate, Why Donate?, <http://ocw.mit.edu/donate/why-donate/> (last visited Nov. 22, 2015).
- ⁴⁷ edX, About, <https://www.edx.org/about-us> (last visited Dec. 7, 2015).
- ⁴⁸ edX, How It Works, <https://www.edx.org/how-it-works> (last visited Dec. 7, 2015).
- ⁴⁹ Supra note 47.
- ⁵⁰ Open Education Consortium, Courses by Institution, <http://www.oecconsortium.org/providers/> (last visited Dec. 5, 2015).
- ⁵¹ Open Education Consortium, Membership, <http://www.oecconsortium.org/members/> (last visited Dec. 5, 2015).
- ⁵² Open Education Consortium, About the Open Education Consortium, <http://www.oecconsortium.org/about-oec/> (last visited Dec. 5, 2015).
- ⁵³ Open Learning Portfolio, <http://www.openlearningportfolio.com/> (last visited Dec. 5, 2015); Open Learning Portfolio, About Us, <http://www.openlearningportfolio.com/Aboutus/> (last visited Dec. 5, 2015).
- ⁵⁴ Supra notes 52 and 53.
- ⁵⁵ Supra note 52.
- ⁵⁶ Supra note 52.
- ⁵⁷ Supra note 52.
- ⁵⁸ Supra note 35 p. 58 (citing Connexions, <http://cnx.rice.edu> (visited Sept. 29, 2005)).
- ⁵⁹ Id. (citing See Connexions, Quality, <http://cnx.rice.edu/aboutus/tour/10.html> (visited Sept. 29, 2005)).
- ⁶⁰ Supra note 58.
- ⁶¹ Supra note 35 p. 58.
- ⁶² OpenStax College, News, *OpenStax College Expects to Save Students \$25 Million this Year* (Aug. 18, 2015) <https://www.openstaxcollege.org/news/openstax-college-expects-to-save-students-25-million-this-year> (last visited Nov. 18, 2015).
- ⁶³ Id.
- ⁶⁴ Id. (quoting Daniel MacDonald, Assistant Professor, Economics, California State University, San Bernardino, California).
- ⁶⁵ Id. (quoting Victor E. Cameron, Engineering Professor, Rice University, Houston, Texas).
- ⁶⁶ OpenStax College, News, *Learn About OpenStax College's eBook Distributors*, <https://www.openstaxcollege.org/news/learn-about-openstax-college-s-ebook-distributors> (last visited Nov. 19, 2015).
- ⁶⁷ OpenStax College, About Us, <https://openstaxcollege.org/about> (last accessed Dec. 8, 2015); supporting foundations include The William and Flora Hewlett Foundation, the Bill and Melinda Gates Foundation, the Laura and John Arnold Foundation, the Twenty Million Minds Foundation, the Maxfield Foundation, the Calvin K. Kazanjian Economics Foundation and the Bill and Stephanie Sick Fund.
- ⁶⁸ Supra note 35 p. 58; Berklee Online, <http://www.berkleeshares.com/> (last visited Nov. 19, 2015).
- ⁶⁹ Berklee Online, www.berkleeshares.com (last visited Nov. 19, 2015).
- ⁷⁰ Open Course Library, About, <http://opencourselibrary.org/about/> (last visited Nov. 19, 2015).
- ⁷¹ Id.
- ⁷² Id.
- ⁷³ Id.
- ⁷⁴ Internet Archive, About, <https://archive.org/about/> (last visited Dec. 5, 2015).
- ⁷⁵ Id.
- ⁷⁶ Internet Archive, Search, "Creative Commons", <https://archive.org/search.php?query=creative+commons&page=2> (last accessed Dec. 5, 2015); Internet Archive, About, Terms of Use, <https://archive.org/about/terms.php> (last accessed Dec. 5, 2015).
- ⁷⁷ Creative Commons, CC Publisher, https://wiki.creativecommons.org/wiki/CC_Publisher (last accessed Dec. 5, 2015); supra note 35 pp. 51-52.
- ⁷⁸ Massachusetts Institute of Technology, OpenCourseWare, *2005 Program Evaluation Findings Report* (June 5, 2006) ("Findings Report"), available at http://ocw.mit.edu/ans7870/global/05_Prog_Eval_Report_Final.pdf

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- ⁷⁹ Findings Report p. 1. (Data sources examined in the evaluation include surveys of 4,115 OCW users, MIT faculty, MIT students and MIT alumni; email feedback; OCW visitor interviews; and affiliate project data. The data over-represented international users, returning visitors and visitors with older systems.)
- ⁸⁰ Massachusetts Institute of Technology, MIT Open Courseware, About OCW, Director Letter, <http://ocw.mit.edu/about/> (last visited Dec. 5, 2015).
- ⁸¹ Findings Report pp. 5-8.
- ⁸² Findings Report, p. 2.
- ⁸³ Findings Report pp. 1-4
- ⁸⁴ Id.
- ⁸⁵ Findings Report, p. 1.
- ⁸⁶ Findings Report p. 5.
- ⁸⁷ Findings Report, p. 69.
- ⁸⁸ Orr, D., M. Rimini and D. Van Damme, *Open Educational Resources: A Catalyst for Innovation*, Educational Research and Innovation, OECD Publishing, Paris (2015), available at <http://dx.doi.org/10.1787/9789264247543/>, p. 133.
- ⁸⁹ Massachusetts Institute of Technology, MIT Open Courseware, <http://ocw.mit.edu/index.htm> (last visited Dec. 5, 2015); supra note 52.
- ⁹⁰ Supra note 4.
- ⁹¹ Findings Report, pp. 3, 5, 35-39.
- ⁹² See supra notes 49 and 66.
- ⁹³ Findings Report pp. 36-39.
- ⁹⁴ Creative Commons, Creative Commons and Educational Resources, https://wiki.creativecommons.org/wiki/Creative_Common_and_Open_Educational_Resources (last visited Dec. 6, 2015)
- ⁹⁵ Findings Report pp. 2, 10.
- ⁹⁶ Findings Report p. 8.
- ⁹⁷ Massachusetts Institute of Technology, MIT Open Courseware, Translated Courses, <http://ocw.mit.edu/courses/translated-courses/> (last visited Dec. 6, 2015); supra note 95.
- ⁹⁸ Findings Report p. 17.
- ⁹⁹ Interview by Mike Linksvayer with David Bollier, Author *Viral Spiral: How the commoners Built a Digital Republic of Their Own* (2009), Creative Commons Webblog, March 5, 2009, available at <http://creativecommons.org/weblog/entry/13189> (last visited Dec. 7, 2015).
- ¹⁰⁰ See Dr. Richard M.K. Adanu, Electronic Learning and Open Educational Resources in the Health Sciences in Ghana, Ghana Medical Journal (December 2010), available at <http://web.knust.edu.gh/oer/pages/index.php?siteid=knustoer&page=publications&id=5>.
- ¹⁰¹ Findings Report p. 12.
- ¹⁰² Findings Report p. 16.
- ¹⁰³ 7 Things You Should Know About Open Educational Resources (June 2010), 2010 Educause, available at <http://www.educause.edu/library/resources/7-things-you-should-know-about-open-educational-resources>.
- ¹⁰⁴ See supra notes 45, 56, 67 and 70.
- ¹⁰⁵ See, Article, Organizing the Unorganized: The Role of Nonprofit Organizations in the Commons Communities, 50 *Jurimetrics J.* 275.
- ¹⁰⁶ 17 U.S.C. § 203.
- ¹⁰⁷ Timothy K. Armstrong, *Shrinking the Commons: Termination of Copyright Licenses and Transfers for the Benefit of the Public* (2010), https://en.wikisource.org/wiki/Shrinking_the_Commons:_Termination_of_Copyright_Licenses_and_Transfers_for_the_Benefit_of_the_Public#cite_note-11; see also supra note 39, pp 318-319.
- ¹⁰⁸ Creative Commons, Category: Case Law, https://wiki.creativecommons.org/wiki/Category:Case_Law (last visited Dec. 7, 2015).
- ¹⁰⁹ Creative Commons, *Jacobsen v. Katzer*, https://wiki.creativecommons.org/wiki/Jacobsen_v._Katzer (last visited Dec. 7, 2015).
- ¹¹⁰ Supra note 108.
- ¹¹¹ U.S. Copyright Office, Library of Congress, Circular 1a, A Brief Introduction and History.

¹¹² Orr, D., M. Rimini and D. Van Damme (2015), *Open Educational Resources: A Catalyst for Innovation, Educational Research and Innovation*, p. 19, OECD Publishing, Paris, available at <http://dx.doi.org.10.1787/9789264247543-en>.

¹¹³ Eric E. Johnson, Article: *The Economics and Sociality of Sharing Intellectual Property Rights*, 94 *B.U.L. Rev.* 1935, pp. 41942-1943, 1945.

¹¹⁴ Id. (quoting Lawrence Lessig, *Free Culture*, pp. 282-283).

¹¹⁵ Id. (quoting History, CC Wiki (Apr. 28, 2011), <http://wiki.creativecommons.org/History>, archived at <http://perma.cc/8KY2-UKVT>.)

¹¹⁶ *Supra* note 2.

¹¹⁷ *Giving Knowledge for Free/The Emergence of Open Educational Resources*, Organisation for Economic Co-Operation and Development (2007).

¹¹⁸ Neil Butcher for the Commonwealth of Learning and UNESCO, *A Basic Guide to Open Educational Resources* (2011, 2015), p. 13, available at unesdoc.unesco.org/images/0021/002158/215804e.pdf.