

Open access and Creative Commons – A new platform for open educational resources and scientific research

No doubt science progressed for centuries without Internet technology. Information was passed between scientists through personal contacts, letters and journals publications. The interpersonal skills of scientists were essential and researchers who were unable to share their findings with colleagues or the world were confined to obscurity. Powerful scientific societies and their journals in the world of science held a monopoly on the flow of scientific publications.

But the Internet has nearly completely overturned these aspects of scientific communication. Anyone can publish his/her good quality work and share it within no time with the whole world of science. Internet provides a new opportunity to bring information to a wider audience at virtually no or marginal cost, and allows its use in new, innovative ways. Yet, too often, research results are not available to the broadest community of potential users because of the draconian laws of copyright. This has resulted in a call for a new framework to allow research results to be more easily accessed and used – a call for open access.

With open access, researchers can read and build on the findings of others without restriction – permitting any user to read, download, copy, distribute, print, search or link to the full text of these articles, crawl them for indexing, pass them as data to software or use them for any other lawful purpose. Research advances only through sharing of results, and the value of an investment in research is only maximized through wide use of its results. Much scientific and medical research is paid for with public funds. Results of publicly funded research should be shared in cost-effective ways in order to stimulate discovery and innovation, and advance the translation of this knowledge into public benefits. Open access allows taxpayers to see the results of their investment.

Creative Commons (CC) is a nonprofit organization that enables the sharing and use of creativity and knowledge through free legal tools. CC is playing an instrumental role in the open access movement, which is making scholarly research and journals more widely available on

the web. The organization has released several copyright licenses known as CC licenses free of charge to the public on conditions of their choice. CC licenses let you easily change your copyright terms from the default of 'all rights reserved' to 'some rights reserved'. CC licenses are not an alternative to copyright. They work alongside copyright and enable you to modify your copyright terms to best suit your needs. The world's largest open access publishers (PLoS, Wikipedia, BioMed Central, Hindawi Publishing Corporation, Nature Publishing Group, MIT Libraries, PLoS Blogs, Science 3.0, The Personal Genome Project, Encyclopedia of Life, Open IE (energy information data), Sage Bionetworks, Polar Information Commons (PIC), JISC Open Bibliography) use CC licenses to publish their content on-line and also expanding open access to research institutions.

Based on choices, one can easily get a license that clearly indicates how other people may use his/her creative work¹.

CC-BY (attribution), which allows users to copy, transmit and reuse the information, and to remix or adapt the information, as long as attribution regarding the source of the information is maintained.

CC-BY-SA (attribution–share alike), which has the additional constraint on top of CC-BY that if you alter, transform, or build upon this work, you may distribute the resulting work only under the same, similar or a compatible license.

CC-BY-NC (attribution–non commercial), which has the additional constraint on top of CC-BY that you may not use this work for commercial purposes.

CC-BY-NC-SA (attribution–non commercial–share alike), lets others remix, tweak and build upon your work non-commercially, as long as they credit you and license their new creations under identical terms.

CC-BY-ND (attribution–no derivatives), allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to you.

CC-BY-NC-ND (attribution–non commercial–no derivatives), is the most re-

strictive of the six main licenses, only allowing others to download your works and share them with others as long as they credit you, but they can not change them in any way or use them commercially.

The more we understand about science and its complexities, the more important it is for scientific data to be shared openly. It is not useful to have many different laboratories doing the same research and not sharing their results.

With this openness in mind, CC has relaunched its India chapter² on 12 November 2013 in Delhi with three affiliates – Wikimedia India, Centre for Internet and Society, and Acharya Narendra Dev College (Delhi University) with goals of raising awareness on licenses and open education resources. CC's India chapter was initially launched in 2007 at IIT Bombay, but not enough groups were involved in promoting it.

Speaking at the relaunch, Shashi Tharoor, Minister of State for Human Resource Development (MHRD) said that as part of the national mission on education through ICT, all services for students are available for free through Sakshat under CC license. This service provides access to the same information to students from all parts of India. MHRD along with NCERT recently launched the National Repository for open Educational Resources³ also carrying CC license and has taken the initiative of declaring that the Repository will help reach the unreached and empower all by providing free educational resources in multiple languages and formats.

1. <http://creativecommons.org/licenses/>
2. <http://wiki.creativecommons.org/India>
3. <http://nroer.gov.in/home/>

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