EU-StORe
Research paper

Compare different criteria for open education

Research about ranking methods for quality criteria- development of a list/ checklist

Partner 6- – Libera Università Maria Ss. Assunta LUMSA University- Italy

Project Title: European Standard for Open Education and Open Learning Resources

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Research and development on literature of open education

In recent years, the concept of "openness" in educational literature has attracted widely interest (Downes, 2005) with support from national and international institutions and organizations (William and Flora Hewlett Foundation, UNESCO, MIT and the Open University UK). Peter and Deimann (2013) introduced the long history and role of the concept of openness in education related to sharing educational resources.

Brown and Adler (2008) describe the ways for teaching and learning in the forthcoming decades by employing the term "long-tail of education". The expression explains the situation where "each learner can select education he or she receives based on interests in various subjects, types, and levels on the web" (Brown & Adler, 2008). Open education is changing the form of teaching and learning by the advancement of the Internet (Nagashima, 2014). Its philosophy is based on a philanthropic idea, "knowledge should be free and open to use and reuse" (Baraniuk, 2008).

As we know, the concept of open education includes necessarily the development of Open Educational Resources (OER). A representative schema for thinking about which framework the OERs should have, is established by Wiley (Wiley, 2010):

- **"Reuse**: the right to reuse the content in its unaltered/verbatim form (e.g., make a backup copy of the content).
- **Revise**: the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language).
- **Remix**: the right to combine the original or revised content with other content to create something new (e.g., incorporate the content into a mashup).
- **Redistribute** the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)."

Although relying on different terms (Hylén, 2006), Open Educational Resources mainly consist in digital assets (images, videos, music, words, animations etc.) openly available and reusable (McAndrew, Santos et al., 2009), in "any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that are openly available for use by educators and students, without an accompanying need to pay Royalties or license fees" (Kanwar & Uvalic-Trumbic, 2011), in "digital databases that house learning content, applications and tools such as texts, papers, videos, audio recordings, multimedia applications and social networking tools. Through these repositories, [OER] are rendered accessible to learners and instructors on the World Wide Web" (McGreal's, 2011).

Pirkkalainen & Pawlowski (2010) identify OERs as "*Any digital resource, which can be freely accessed and used for educational purposes*". Conole and McAndrew (2010) emphasize the open licence allowing the use and reuse of the resources, and the term 'Open Courseware' (OCW), which means free and open digital publication of high quality educational materials. OER means also to make educational material available in many language (Keller and Mossink, 2008).

Some of open issues remain in the field of OER study: the nature of the resource, the source of the resource, the level of openness (Camilleri, Ehlers & Pawlowski, 2014). The nature of "open access" (OA) is referred to two meanings: one is referred to as *gratis* and the other is referred to as *libre* (Vollmer, 2012) that can be expressed in terms of a Creative Commons license, which grants the licensor "a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the work as stated below"[1].

Ischinger (2007) includes in the OERs: "learning content (full courses, courseware, content modules, learning objects, collections and journals); tools (software to support the development, use, reuse and delivery of learning content); implementation resources (intellectual property licenses to promote open publishing of materials)". As highlighted by Wiley (Wiley, 1998), the development of educational resources can be conducted in agreement with characteristics and principles of open source software development. Indeed, OER and open source software have many developmental aspects in common (Hylén 2006, Barbosa & Maldonado 2011). Particularly, innovative methods can permit to create well-designed and high-quality open educational resources. An infrastructure for the development of OERs plays a fundamental role to support new learning approaches and opportunities (Barbosa, Gimenes & Barroca, 2012).

Educational resources should be able to foster autonomy, encourage diversity, promote interaction and supporting openness (Barbosa, Gimenes & Barroca, 2012). Success factors of OER and MOOC are indicated in three categories: organizational factors, pedagogical factors, and social factors (Nagashima, 2014).

During the past decade, the European Commission has funded several projects, which dealt with the production, collection, presentation, quality, and management of OER: "Ariadne1" (on-going), "OrganicEdunet2" (ended 2010), and "Open Science Resources3" (ended 2011); "Concede4" (ended 2010); "QMPP5" (ended 2007); "OERTest6" (ended 2012); "OpenDOAR7" (ended 2011); "OPAL8" (ended 2012); "ROLE9" (started 2014); "Open Discovery Space10" (started 2012) just to name a few. OER Research Hub (OERRH, 2014) is a research project at

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[1]   From http://creativecommons.org/licenses/

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The Open University (UK) to examine the impact of open educational resources around the world (Farrow, R., 2014).

An additional criteria for an "appropriate OER" must be understood as "a document that at least allows re-purposers to modify contents on both the legal (by license) and the technical (by format) level (Richter & Veith, 2014).

In the end, support open literacies can mean develop digital skills in open practices considering "Collaboration, Searching, Repurposing and Translation" (Atenas & Havemann, 2014) possible aspects of an successful open education.

Open education in Italy

In line with the global revolution in teaching and learning, Italy is also going to take part in a worldwide effort to make education more accessible and more effective. In Italy, the philosophy of "open access" is developing continuously thanks to Web 2.0 technologies built on e-learning platforms. The Ministry of Education decree of September 2013 on the use of digital textbooks presented a differentiation between learning resources:

- on the one hand, there are the educational tools with a specific function in the national curriculum, such as textbook - paper or digital
- on the other hand, there is the growing need to introduce a systematic use of open educational resources at the school level, as they already are at the university level.

Moreover, the decree contains guidelines regarding how to develop books in the future, which are planned to be mainly in electronic format, replacing in this way the traditional paper based format.

 The software used for digital books will be open and interoperable, accessible with the same quality on all electronic devices, from computers to tablets. The conversion to digital will therefore happen gradually from 2014/2015 at different school levels.

In Italy, many portals were created with the purpose to be OERs. One of these is called "Federica" (http://www.federica.unina.it), it is a comprehensive e-learning portal established in 2007 at Federico II University in Naples, and it offers over 100 courses covering all 13 University departments from Engineering to Medicine, Social Studies and Agriculture. In the overview of open educational resources, the Italian experience of "Federica" has allowed to promote a new culture, a culture-bridge between the *printing literacy* and *digital culture* (De Rosa & Zuccarini, 2011).

The Tuscany Region promotes another web learning system called TRIO (http://www.progettotrio.it). The system is based on open source software environments and it provides free training products and services in specific areas. TRIO offers a broad portfolio

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of training activities (currently about 1,700) and was awarded with "Italian Web Awards 2002" and the "Public Administration Award" (June 2002).

The growth of open educational resources set the basis for a participative way to learn, create, share and cooperate among individuals, which is necessary in our constantly changing society. Nonetheless, many barriers to the complete achievement of this vision are still present, i.e. a distrust towards the authoritativeness of OERs and the recognition of the benefits they can bring, the differences between the types of license to open resources and the access to computers and networks[2].

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[2] Cape Town Open Education Declaration: Unlocking the promise of open educational resources, [http://www.capetowndeclaration.org/read-the-declaration], (accessed 2015-03-16).

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