



# Chapter 1. Colearning - collaborative open learning through OER & social media

**KMi TEAM TOOL-LIBRARY**  
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## **ABSTRACT**

This chapter introduces the concept of colearning as well as discussing how open learning networks can produce, share and reuse OER collaboratively through social media.

## **COLEARNING OBJECTIVES**

The aim of this investigation is to identify new forms of collaboration, as well as strategies that can be used to make the production and adaptation processes of OER more explicit for anyone in a social network to contribute.

## **REUSABILITY**

This open content is an adapted version of a conference paper for OCW conference 2012, which was created by the same authors. This chapter can be reused by:

- Educators who would like to create reusable OER (images, videos, maps, units).
- Learners who are interested in tools for reusing and adapting OER
- Content developers who are looking for different media to enrich OER
- Social network users who would like to produce and share open media content

## **KEYWORDS**

colearning, collaborative networks, reusability, OER, social media

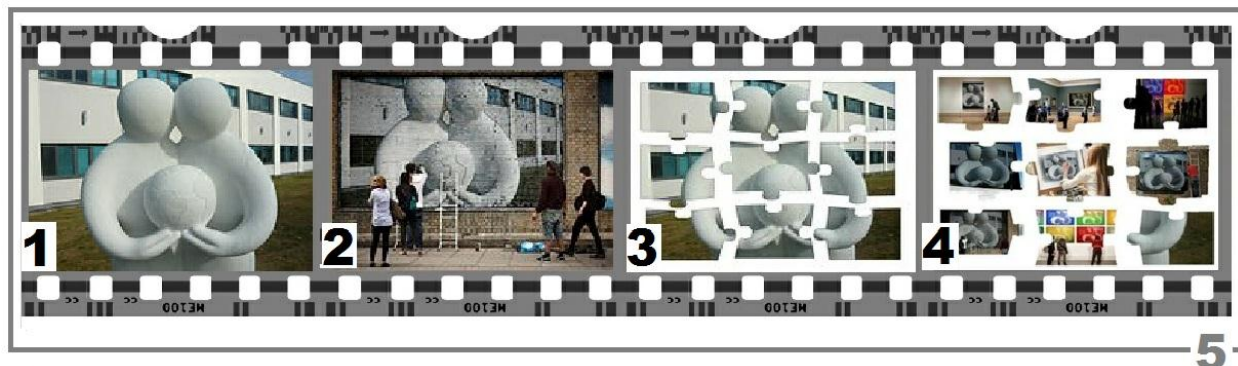


## 1. OPENING

What is “colearning - collaborative open learning”?

Why is colearning important in this digital age?

How social media and OER can support colearning?



OER1: Learning together in different open ways through social networks

Author: Ale Okada

Previous Authors: Nely Mila VATI, Ale OKADA, Beto STEIMBER

Source: [Wikimedia Commons](#)

Description: This image was created through various adaptations made by different users with different tools presented in the OPENSOCOUT Tool-Library ([SumoPaint](#), [Jigsawsite](#), [Photofunia](#) e [LunaPic](#))

Objective: Be aware of new ways of reusing open educational ideas, content and tools.

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The figure OER1 illustrates the continuous and recursive process of reusing ideas, content and tools by different participants through colearning - Collaborative Open Learning. Its content is the result of several adaptations by different people using different tools. Initially, OKADA recommended the open application “PhotoFunia” for recreating photo montage using different templates. She also shared an example and her original photo. VATI, then reused that photo to produce a puzzle collage with the open tool “Jigsawsite”. She also shared her adapted image. STEIMBER reused these three productions as well as the puzzle idea which was applied to different photos that were remixed. This fourth was created using SumoPaint suggested by another colleague, LILA. Finally, OKADA remixed all these four images into a filmstrip using Lunapic tool to create the representation of this process.

All these five productions, designated as open educational images, were also shared in different social media repositories, e.g. Flickr, Picasa and Wikimedia Commons. Any web users can, therefore, access and reuse them under Creative Commons License.

These open educational images were created using a collective design process that presents relevant information about the image such as: what (title), who (authors + previous authors), where (source), how (description), why (objective + license) (Okada, 2012). Social media and OER are consequently very relevant for providing opportunities for wide sharing and collective learning, in which users can learn from each other’s product and method of producing it. When educational product and process are open, learners can reuse not only its content, but also, tools and methods.



## 2. INTRODUCTION

Social media networks have been changing the ways individuals and collectives communicate and learn with each other. That means how we acquire and use information as well as how we create and share knowledge and information that are based on web2.0 applications that allows the creation and exchange of User-Generated Content (Kaplan and Haenlein, 2010). Web 2.0 technologies have created a sense of “*always being in touch or reachable*”, enabling at the same time the sharing, remixing and reuse of open content online and new ways of “*Collaboration 2.0*” (Okada et al, 2012). Users, professionals and enterprise as well as learners and educators can now self-manage and self-maintain their own collaborative networks through social media.

Social media presented an impressive growth in 2011. Statistics show that social media increased from 36% of global Internet users to 59%, reaching a total of 2.8 billion social media profiles that is equivalent to half of all web users worldwide. The number of Facebook users is currently more than 800 million, with more than 200 million registrations per year. YouTube has become the second largest search engine in the world after Google, receiving two billion views a day. With regard to content published through social media per week, more than 3.5 billion pieces of content are shared in Facebook, more than 1 billion in Twitter, and more than 604,800 hours of video in YouTube (Social Media Today, 2012; Social Marketing Trends, 2012; Digital Buzz, 2012). More specifically related to open content under Creative Commons License, Flickr hosts 200 million in October 2011; Wikimedia Commons has over 12 million files in January 2012. Vimeo added the Creative Commons Attribution license as an option for all users on July 2010. YouTube also implemented an open license but only on June 2011 and started with an initial open library with 10,000 videos.

Social media can be very useful for collaborative open learning through OER due to several key factors, such as global audience dissemination, instantaneous responses and editing, availability for any web user to contribute, easy-to-use interface as well as little or no cost (Okada, 2012; Mikroyannidis et al, 2011b; Alexander, 2008; Anderson, 2007). This investigation focuses on the use of social media tools for promoting collaborative open learning by engaging open social networks in producing, adapting, sharing and disseminating OER collaboratively. The aim of this investigation is to identify new forms of collaboration, as well as strategies that can be used to make the production and adaptation processes of OER more explicit for anyone to contribute.

This chapter, therefore, aims to introduce first this process of colearning as learning together in different open ways through OER and social media. Second, it discusses the concept of reusability and the framework – OER FLOW – for facilitating the OER production and adaptation. Third, it presents the case study, in which this example above (OER 01) was created as well as highlighting new forms of collaboration through various open media components. Additionally, it provides an activity for readers who would like to contribute to this study. Finally, it summarizes strategies, barriers and future directions.

## 3. BACKGROUND

Understanding the creation of interactive and collaborative productions using social media will be essential for producing and disseminating useful Open Educational Resources (OER). The term “social media”, which means the production by many to many in a decentralized way (Kaplan and Haenlein, 2010), was created before the Internet. However, due to Web 2.0, which supports User-generated content, this term has become extremely popular. Some examples of social media are: Wikis, Blogs, Groups, Twitter, MySpace, Facebook, LinkedIn, Flickr, YouTube, Last.fm, Second Life, Wikipedia and many other services. Kaplan and Haenlein (2010) define social media as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content”.

The process of recreating new content from existing open resources through social media network provides opportunity for collective open learning, where colearners can learn together not only from



accessing content but also from the experience of reconstructing them by integrating their own interpretation as well as getting feedback from their social networks (Okada & Leslie, 2012).

Several studies discussing social media and OER have emerged during the last six years presenting a variety of theoretical discussions and case studies, in which several social media roles for open education can be described. The discussion about social learning space for OER, presented by Buckingham Shum and Ferguson (2012), summarizes some of the dimensions that characterize the social learning design space: learning peers and mentors who both affirm and challenge, 1-1 mentoring, learning conversations, reflection encouraged by the UI, meaningful connections, learning analytics, recommendations, a secure e-portfolio and verifiable accreditation. Reflecting on these dimensions and the meaning of “open”, social media plays a key role for providing space for collaborative interactions, in which learning support for locating and engaging with OER can be provided by all participants.

De Liddo (2012) emphasizes that social media infrastructure based on collective intelligence presents a relevant role for gathering the evidence of OER effectiveness and providing any user (including policy makers) with a community-generated knowledge base to make evidence based decisions. As an example, she describes an environment “the open education evidence hub” a collective intelligence tool for evidence based policy.

Based on the study presented by Ram et al (2011), social media is also important for providing a new venue for increasing self-motivated and self-guided learning through open social learning communities. Social media also provides a new venue for collaborative educators. Another significant role played by social media and networking environments, highlighted by Conole and Culver (2009), is to provide a dynamic open environment for finding, sharing and discussing learning and teaching ideas and OER designs. Additionally, Franklin and Harmelen (2008) discuss the importance of social open environments allowing greater student independence and autonomy, greater collaboration as well as increased pedagogic efficiency.

Focusing on open communities of learning and knowledge building, Hemetsberger and Reinhardt (2006) explain that media richness is decisive to help users to transform tacit knowledge to explicit and comprehensible knowledge for others through the ability to share widely non-verbal cues, personality traits, rapid feedback, as well as natural language. Interpreting key issues of this study, meaningful pieces of content shared through social media can enable reflective discourse, re-experience and participatory learning.

This investigation focuses on the relevant role played by social media: colearning – collaborative open learning. The term colearning was initially defined in 1996 by Frank Smith in the book “Joining the Literacy Club”. This concept was used to emphasize the importance of changing the role of, respectively, teachers and students from dispensers and receptacles of knowledge to both colearners - collaborative partners on the process of sensemaking, understanding and creating knowledge together. In addition, a decade later, Brantmeier (2005) explains that colearning acts toward student centered learning as well as building a more genuine “community of practice” through dynamic and participatory engagement for collective construction of knowledge. This concept became, currently, more popular due to the rapid advances of Web 2.0, which allows the creation and exchange of user-generated content, information sharing, interoperability, user-centered design and social networking. Due to the philosophy of openness, the process of colearning is enriched through wide participation for creating, adapting and reusing OER (Okada 2012).



	Traditional e-Learning through VLE	Colearning through OER and Social Media
Community	Specific structured predefined roles	Diverse, flexible and collaborative roles
Educators	Knowledge source	Collaborative mentors, learning coaches, competence and knowledge facilitators.
Students	e-learners Reflective peers	colearners, collaborative participants, co-authors, peer reviewers, social learning managers
Authorship	Experts in the field	Diverse authors and co-authors : professionals, researchers, educators and co-learners
Curriculum	Pre-defined materials pre-established by the institution	Flexible process shared by users through formal and informal learning
Learning Scenarios	Disconnected from the learning process or context	Inquiry-based learning, authentic learning social and real context
Learning content	Specific format, no editable low granularity	Diverse open formats, hybrid, editable and reusable high and low granularity
Content Production	Sequential: Planning – Development –Review – Publishing – Deliver	Flow: collaborative planning, collective creation, open publishing, wide dissemination, peer-review, reuse and adaptations , continuous improvements
Review	Conducted by Experts	Communities of practice, Social networks
Quality/ Credibility	Institutional	Collective feedback, Shared comments, social tracks and learning paths
Sources	Learning packages	Interoperable repositories
Copyright	Copyrights reserved	Open licenses (e.g. Creative Commons)
Upgrade	Little update	Frequent update , continuous improvements
Learning tools	Webpages, discussion forum, forms e-portfolios and quizzes	Social Networks, Web and micro blogs, Wikis, RSS feeders, PLE, webinars, social calendars, collaborative and collective task managers
Web services	Search engines, calendar, activities, portfolio	Mobile apps, rich media content, RSS feeds, widgets, social bookmarking, clouds, social networking, analytics
Learning Access	Restricted, limited, registration and authentication	Open access, diverse environments connected, users can decide what is public or private
Learning management	Self-guided Structured by week or by topics	Collaborative open learning path, Traces of use and recommendations by other co-learners. Shared reviews and feedbacks from any user
Assessment	Formal assessment, Exams Online activities	Self-assessment, guided orientation, informal feedback, competency-based assessment, flexibility for Accreditation of OER, OER Badges systems

Table 1 - colearning through OER and Social Media by Okada(2011)

Additionally, considering the rapid increase of social media users and social networks, several features and key differences can be defined between the traditional e-learning in Virtual Learning Environments (VLE) and colearning through OER and social media (see table 1).

All these features highlight the importance of colearning where co-learners play significant roles such as: co-authoring OER, sharing collective feedback and reviews, co-orchestrating their learning production and process as well as disseminating collaborative learning paths.



There are however several challenges in this process. Several studies highlight some significant barriers in co-authoring OER, particularly OER to be reused (Collis and Strijker, 2003; Harley et al., 2006; Petrides et al., 2008; Okada and Connolly, 2008, Connolly and Scott, 2009). The majority of best practices with OER in higher education (HE), in fact, show more evidence about 'first use' quality aspects rather than specifically presenting evidence of 're-use'.

Recent research about recommendations for extending effective reuse (Okada, 2010) remarked upon significant issues to be overcome, particularly the lack of a culture of reuse, which includes social, technical, pedagogical and legal aspects. Diverse topics were highlighted, such as:

- the lack of interest for reusing and developing OER,
- the need for efficient tools to facilitate and simplify reusability,
- the low communication among different stakeholders, as well as
- the importance of social collaboration for discoverability and credibility around the content.

Many barriers were indicated, such as:

- understanding and meeting learners' needs catching up the rapid advances of technology;
- implementing appropriate legal aspects;
- disseminating clear issues with respect to copyright and;
- designing reusable resources by taking into consideration several requirements: technological, pedagogical and cultural.

#### **4- Reusable OER**

Reusability is a key concept selected in this study for educators and learners that create and disseminate OER to be reused widely using social media. When educators and learners are aware of this meaning, they can design OER with reusability in mind.

The definition of Reusable Learning Content (RLC) is defined as "open educational content designed to be reused, therefore, reproducible, addressable and flexible to be adapted multiple times in multiple ways, in multiple purposes, in multiple formats and in multiple contexts by multiple users. RLC can, therefore, refer to "content of learning", "learning objects", "teaching materials", "rich media content", "interactive components" and "open educational resources" (Okada, 2010).

Reusability is therefore an essential feature for OER designers to create content with the facility and flexibility for adopting and/or adapting them. In this context, reusability can be defined as a process of adoption or adaptation. Adopting means selecting the material or part of the material as it is. Adopting involves finding, accessing and making a resource available to be used. Adapting refers to small or significant changes in the content. Thus, the process of reusing OER can be described in numerous forms (such as those listed in Table 2), which define, and therefore, clarify the many different ways in which learning content can be reused (Okada, 2010).




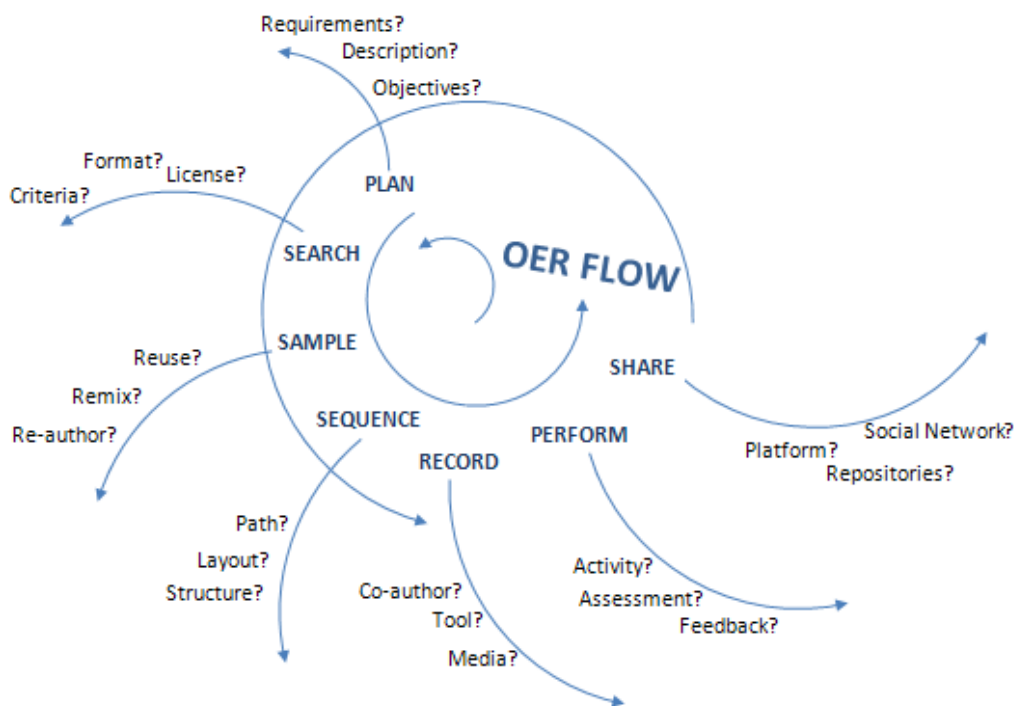
Levels of reusability		Ways of reusing OER
	Recreate content & contribute to new productions	<b>Re-authoring:</b> Transforming the content by adding your own interpretation, reflection, practice or knowledge.
		<b>Contextualizing:</b> Changing content or adding new information in order to assign meaning, make sense through examples and scenarios.
		<b>Redesigning:</b> Converting a content from one form to another, presenting pre-existing content into a different delivery format.
	Adapt part of the content	<b>Summarising:</b> Reducing the content by selecting the essential ideas.
		<b>Repurposing:</b> Reusing for a different purpose or alter to make more suited for a different learning goals or outcome.
		<b>Versioning:</b> Implementing specific changes to update the resource or adapt it for different scenario.
	Adopt same content, but adapt structure, format, interface or language	<b>Translating:</b> Restating Content From One Language Into Another Language.
		<b>Personalising:</b> Aggregating tools to match individual progress and performance.
		<b>Resequencing:</b> Changing the order or sequence.
	Adopt same content (whole, part or combination)	<b>Decomposing:</b> Separating content in different sections, break out content down into parts.
		<b>Remixing:</b> Connecting the content with new media, interactive interfaces or different components.
		<b>Assembling:</b> Integrating the content with other content in order to develop a module or new unit.

Table 2- levels of reusability and ways of reusing OER by OKADA(2011)

Some of the current literature summarised in the study of RLC (Okada, 2010) has been highlighting five principles for content development for reuse which have been summarised by the following list below (LittleJohn, 2003):

- Clear and contextualised learning objectives: reusable resources should be designed based on clear and explicit learning objectives in a way that addresses our own learner’s needs, and then generalised to hypothetical cases of reuse by others.
- Well-described granular content: either small chunks or large sections of courses can be pedagogically effective resources for reuse when their content is simple to understand and makes sense.
- Opportunities for meaningful discourse: reusable content can be more significant when it is designed to be scalable, sustainable, interactive and widely shared.
- Flexible metadata: reusable resources can be more helpful when they offer the opportunity for new users to contribute to the metadata, for instance, by cataloguing the variety of real cases in which context can be wrapped around pre-existing resources, or can be versioned for particular groups of learners.
- Principles for accessibility: accessible principles can be very useful for designing resources that can be reused by users with different needs.

These principles were also applied in the study about the OER Flow (Okada & Leslie, 2012) for co-authoring OER in a flexible and creative way. This approach is based on the metaphor of OER co-authors remixing resources through a similar process to DJs recreating music. In order to represent this process, the image of a spiral below (OER 02) shows some steps to guide the production of reusable OER. The 'OER Flow' aims to encourage the creative process in which colearners and educators can act as co-authors and recreate also their own approaches to produce their open content learning.



OER 2: OER Flow spiral

Author: Ale Okada (Previous Authors: OER Flow by Okada and Leslie, "The Flow" by Leslie)

Source: Wikimedia Commons

Description: This image was recreated using Power Point 7

Objective: Reflect on the process of design OER as a spiral where colearner and coeducators can act as DJ by applying 7 steps for remixing music for recreating OER

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Grounded on the principles for OER development for reuse and the OER flow; this study, therefore, investigates strategies that can be used to make the production and adaptation processes of OER more explicit for any participant to contribute. The more authors produce and share OER, the more co-authors can contribute to the OER flow through a flow movement that increases reusability as well as re-authoring/co-authoring.

This work also analyses what challenges coeducators and colearners may face when producing RLC collaboratively through social media.

## 5.CASE STUDY

The participants were approximately 200 COLEARN group members interested in co-authoring OER using tools in the OPENSCOUT tool library. The majority of them are interested in educational technology, participatory media and social learning.

Colearn - collaborative open learning community - is a Portuguese language community focused on technologies for collaborative learning, which was founded in 2006 during the OpenLearn project (The Open University, UK). Currently, there are more than 3,500 members who have been using LabSpace (<http://labspace.open.ac.uk/>), an open virtual learning environment based on Moodle. Since October 2011 two hundred COLEARN members started to use the OPENSCOUT tool library, a social network platform based on the ELGG framework (<http://elgg.org/>).





The OPENSOCOUT European project aims to investigate “skill based scouting of open user-generated and community-improved content for management education and training”. As part of this project, the OPENSOCOUT tool library (<http://opensocout.kmi.open.ac.uk/tool-library/>) has been implemented as a social network of people that (re)use and adapt OER (Mikroyannidis, et al, 2010, 2011a). The OPENSOCOUT tool library aims at bringing together these people and enabling them to share their experiences and best practices in (re)using and adapting learning resources. In addition, it aims at supporting case studies and learning scenarios, provided by different backgrounds and stages of the lifecycle of learning resources, including adaptation, collaboration and communication tools, in a perfect articulation with the OER principles of use, re-use and sharing content, including multilingual access.

In order to accommodate the sharing of stories and resources, the ELGG social networking platform has been extended with plugins that enable new functionalities for users registering tools and scenarios with examples. There is the opportunity for participants to tag, comment, rate and recommend stories and resources throughout the tool library. Using these social metadata provides a rich method for filtering and identifying the most useful (e.g. highly recommended by peers) stories and resources for a user in a particular situation. For example, based on the format or license of a particular content a user has found, a suite of useful tools can be suggested. Users can also search for tools using the name, terms in the description, license or format. Differently from the VLE (Moodle), COLEARN members can use the social network platform of the Tool-Library (ELGG), which provides networking functionalities, to manage their social contacts based on their interests and institutional research groups as well as expand their learning and social ties, in a public or private way.

The COLEARN participants who started to use the Tool-Library are organised into 30 different academic groups of research in education from Brazil, Spain, Portugal and England, who are classified in five teams: postdoctoral researchers (45%), PhD students (10%), master students (30%), bachelors (11%) and undergraduates (4%).

This study is applying two research methods of investigation: participatory observation and Research 2.0. The first, participatory observation, provides us with an empirical study method for collecting and sharing interpreted data created and shared about the group through the interactions of user within the OPENSOCOUT Tool Library. The second method, Research 2.0, is used to collect and analyze data generated from analytics services such as Google analytics from the OPENSOCOUT Tool Library, as well as YouTube analytics and data collected from the initial online survey. In order to promote interaction and collaboration within participants, three important procedures were established by the COLEARN Community in the Tool Library:

- First procedure is a survey for all participants to describe both personal and professional interests as well as academic background, technology skills including experience with social networks, whose data was shared within the community.
- Based on their interests, second procedure refers to production of an open educational media (an image, an audio-visual and a social network map) about the openness philosophy in Education connected to individuals and groups’ research themes. This also includes a collaborative reconstruction of the open video clip “Shared Culture” created originally by Creative Commons.
- The third procedure focuses on developing an OER unit in groups that integrates the open educational media components created by participants. It also focuses on disseminating the OER production and OER tools through social media.

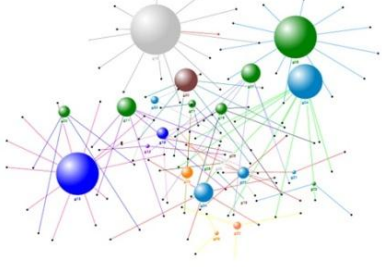
These three procedures motivated COLEARN Community to create six kinds of OER collaboratively during the period of October 2011 to March 2012:

- open educational information: 48 tools description, 60 msgs, 25 scenarios
- 84 open educational images:
- 20 open educational videos:
- 40 open educational maps,
- 20 open educational units:
- 1 open educational collection:



Six new forms of collaboration, which emerged during this process, were observed during this investigation:

### I. Sharing Open educational information


	<p>OER3: Social Networks – created with NodeXL</p> <p>Author: COLEARN Community Source: <b>Tool Library</b> Objectives: Visualise social network interaction among research groups License: Work in progress. To be licensed as Creative Commons References: shared in FM, Tool-Library, FaceBook</p>
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Open Educational information refers to public, online accessible messages about events, news, references, technologies and about the process of producing OER. These messages also include suggestions, questions, recommendations and reflections. Additionally, they may contain links to content in various formats, such as images, graphs, text and video clips.

Open educational information generated by the COLEARN Community has been shared in different social media environments: discussion forums in the Tool Library, individual and group interactions in Facebook, as well as microblogging in Twitter. This information concerns events, news, references and production of OER.

Figure OER3 shows a social network analysis of COLEARN research groups with more than 200 people from different locations of Brazil, Portugal UK Spain and France. This image was developed in NodeXL by users of COLEARN and was shared and discussed via the FlashMeeting video conference facility (<http://flashmeeting.open.ac.uk/>) and Facebook. This is part of a collaborative study about Participatory Social Network Analysis by OER communities (Okada, Meister and Mikroyannidis, 2012). The aim of this study is to examine different perspectives of a social network analysis developed by its own users. This case study focuses on the COLEARN open social network in Higher Education interested in OER, as well as the application NodeXL, which is an open tool for social network analysis. The key claim of this study is that the ability to collect and analyse the actions of educational social network by its own participants offers useful perspectives on collaborative OER production and learning.

### II. Creating Open educational images

	<p>OER 4: “Learning Together” through social networks – created with ArtenSoft Collage Maker</p> <p>Author: Beto Steimber Source: Wikimedia Commons &amp; Tool-Library <a href="http://openscout.kmi.open.ac.uk/tool-library/pg/pages/view/6935/">http://openscout.kmi.open.ac.uk/tool-library/pg/pages/view/6935/</a> Objectives: Reflect on social networks, recreation, reuse, remix of OER (productions and processes) License: work in progress under Creative Commons license References: Images &amp; Photos by COLEARN shared in Wikimedia Commons, Picasa, Flickr, Tool-Library, FaceBook</p>
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Open Educational Images are files in different formats (JPG, GIF, PNG, ...) with an open license produced with an explicit educational purpose that is presented with the file. These images with open access and educational use might refer to photos, pictures, graphics, abstract paintings, collages and artistic composition that can be reused by other users following the indications of the Creative Commons license. Although users can use these files with other purposes, additional information about the image, such as ideas, methods and applications might be useful to enrich their new productions.

Open educational images created by the COLEARN Community have been shared in different repositories, such as Wikimedia Commons, Flickr and Picasa as well as social networks Facebook and Orkut. All these images were created by using an open shared template defined by the community to facilitate location and reuse, including better understanding of learning context and objectives.

Colearners have been creating these images using a set of diverse tools shared in the OPENSOCOUT Tool Library (e.g. OER 4). The community has been collaborating not only by creating open educational images but also adding more information in the OPENSOCOUT Tool Library about image editors (e.g. PowerPoint, Picasa, Gimpshop, Myoats, Kaleido, Sumo Paint, Free Online and Photo Editor) and sharing in Facebook. One of the key aims of the COLEARN community is to understand how to create meaningful images with an explicitly stated educational purpose and how the image can help colearners construct new meanings as well as new visual interpretations by reusing the same image and different tools.

### III. Producing Open educational videos

	<p>OER 5: Web 2.0 OER and COLEARN community - created with iMovie</p> <p>Author: Ale Okada and Izabel Meister Source: Youtube &amp; Tool-Library <a href="http://www.youtube.com/watch?v=pKnyuuR7pfQ&amp;feature=related">http://www.youtube.com/watch?v=pKnyuuR7pfQ&amp;feature=related</a> Objectives: Acquire a deep understanding of the OPENSOCOUT Tool Library social network and identify ways of contributing to OER book production License: Creative Commons References: shared in Youtube, Facebook, G+. Twitter, Tool-library</p>
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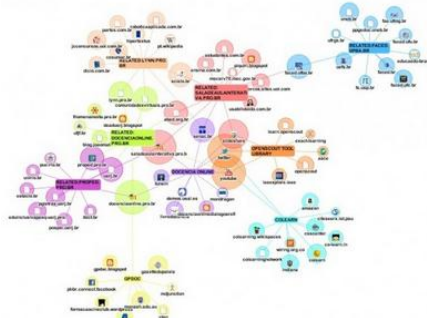
Open educational video clips are short video files in various formats (MOV, AVI, M4V, ...) with an open license produced with an explicit educational purpose that is presented with the file. The video clips can refer to interviews, presentations, excerpts from lectures, tutorials on technology, short stories and other audiovisual productions for learning that can be reused by other users following the indications of the license. These users can repurpose these OER by selecting specific portions of the video or remixing it with new files. They also can improve their production based on the ideas, methods and applications used to produce the original version.

Open educational videos produced by the COLEARN Community (e.g. OER 5) have been also published in different repositories such as YouTube, Vimeo and TeacherTube. These movie clips were created through an open template. The intention of this template is to help users identify learning objectives and content. Diverse tools for editing and adapting movieclips were shared in the OPENSOCOUT Tool Library and its URLs were then disseminated in Facebook by participants. These tools include Picasa, Youtube, Video Editor, Windows Movie Maker/Windows Live Movie Maker, and Camtasia.

Colearn Community also aims to investigate useful strategies to facilitate adaptation of digital films as well as analyse how social media networks can contribute to disseminate and recreate new versions.



### IV. Elaborating Open educational maps


	<p>OER 6: Collaborative Learning network map - created with Touchgraph</p> <p>Author: Rosemary dos Santos  Source: Tool Library  <a href="http://openscout.kmi.open.ac.uk/tool-library/pg/pages/view/6935/">http://openscout.kmi.open.ac.uk/tool-library/pg/pages/view/6935/</a>  Objectives: Analyse how graphical visualizations can contribute to understand collaborative learning networks  License: Creative Commons Attribution licence  References: shared in Tool-Library</p>
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The open educational maps are graphical representations that can represent concepts (conceptual map), arguments (map argumentative), brainstorming (mind map) and information from the web (Web Map). These maps under Creative Commons license may be available in open repositories, thus other users can edit and adapt their content.

Open educational maps elaborated by the COLEARN Community (e.g. OER 6) have been shared in Facebook and also in the same repositories of images. Several tools were used to create these maps (e.g. Compendium, Freemind, Mindmeister, Mind42 and Touchgraph). Some versions of these maps are available in public maps repositories, such as the OpenLearn LabSpace (<http://labspace.open.ac.uk/>) for Compendium Maps, as well as the CMap server ([cmap.ihmc.uk](http://cmap.ihmc.uk)) for maps created in Cmap Tools. Other files can be accessed as images and are available in Wikimedia Commons and Flickr.

The community is also interested in analysing how different visualizations through maps can be useful not only as educational content for learning but also as a useful method for OER research.

### V. Integrating Open educational units

<p><b>Abertura</b></p> <p>Resumo: O texto de abertura de uma nova disciplina, esta monografia visa introduzir a filosofia da abertura e procurar dialogar sobre RSE.</p> <p>Palavras-chave: Filosofia da abertura, RSE, aprendizagem, aprendizagem aberta</p> <p><b>Objetivos de aprendizagem:</b> Os leitores de suas comunidades de pesquisa estarão capazes de:</p> <ul style="list-style-type: none"> <li>Identificar questões importantes relacionadas com RSE</li> <li>Discutir as características básicas de RSE</li> <li>Trocar e refletir sobre suas temáticas correlacionadas com a filosofia da abertura</li> </ul> <p><b>Resumo das Realizações:</b> Esta monografia educacional aberta, pode ser realizada em virtudes educacionais de RSE para aprendizagem, educação e pesquisadores. Este conteúdo de foi elaborado de um texto de conferência ainda não publicado. A criação para publicação e edição, foi o material participativo design for creating Open Educational Resources using social media - 8th International Conference on Design Processes and Practices 2015.</p> <p><b>ABERTURA</b></p> 	<p>OER 7: Web 2.0 and Open Educational Recourses (OER) into learning and professional development - create in Word &amp; Adobe</p> <p>Author: COLEARN community  Source: COLEARN Facebook, OER Blog, LabSpace, Tool Library  <a href="http://openscout.kmi.open.ac.uk/tool-library/pg/pages/view/4906/">http://openscout.kmi.open.ac.uk/tool-library/pg/pages/view/4906/</a>  Objectives: Be aware about openness philosophy and discuss the meaning of OER and social media for widening learning participation.  License: Creative Commons  References: shared in Facebook, G+, Twitter, Tool-library</p>
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Open educational units are resources that contain comprehensive content with conceptual and practical sections as well as learning activities. These units can either be focused on specific issues that deepen a particular theme or present a new introductory content.

Each research group of COLEARN developed an open educational unit, which integrates open educational media components described above. These units (ex. OER 07) can be shared in different repositories such as OpenLearn LabSpace, OER Blog and OPENSOCOUT Tool-Library.

The first part, which contains chapters in Portuguese, is now accessible to readers to send their feedback and help to enhance the quality of this work. The next step for the community is to examine what are the key issues for designing the unit by integrating all these educational social media components.



## VI. Open educational collection

	<p>OER 8: Web 2.0 and Open Educational Recourses (OER) into learning and professional development</p> <p>Author: COLEARN community Source: OER BLOG, COLEARN Facebook and twitter, <a href="http://oer.kmi.open.ac.uk/?page_id=138">http://oer.kmi.open.ac.uk/?page_id=138</a> Objectives: Reflect and discuss how Web 2.0 and OER social networks can be used for learning and professional development License: Creative Commons References: shared in Facebook, Likendin, G+. Twitter, Tool-library</p>
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Open educational collection is an example that combines several educational units under Creative Commons license. This collection can be a book, a series of units or a course program.

Colearn Community has been creating an open educational book (OER 8) that aggregates all open educational chapters produced by research groups. This collection under Creative Commons license will be available in different formats such as WIKI, PDF, HTML and EPUB for facilitating peer reviews, feedback, reusability and recreation of new work.

Future research of the COLEARN community is to investigate the key issues for disseminating and adapting a collection collaboratively, as well as strategies for obtaining feedback. These issues include also how the OER flow and principles for developed reusable OER can be improved.

### 6-ACTIVITY

All these open educational media components, OER tools and strategies for creating and adapting OER can be accessed in the OPENSOCOUT Tool-library, which is open for public and users. If you would like to explore new tools as well as reuse and recreate OER, you are invited to register in and share your ideas, comments and production in our social network.



OER 9: Web 2.0 OER and COLEARN community - created with iMovie

Author: Ale Okada and Izabel Meister

Source: Youtube & Tool-Library <http://www.youtube.com/watch?v=pKnyuR7pfQ&feature=related>

Objectives: Acquire a deep understanding of the OPENSOCOUT Tool Library social network and identify ways of contributing to OER book production

License: Creative Commons

References: shared in Youtube, Facebook, G+. Twitter, Tool-library



The open educational video OER 09 was produced to explain how the OER book started. If you would like also contribute to this OER book with new themes, you and your colleagues can submit your OER chapter to our OER book following the guidelines published in the OER Book website.

## 7-LESSONS LEARNED

The rapid increase of social media suggests the importance of investigating strategies for developing colearning networks around OER, not only for social learning, but also for collective production. All these important roles that social media play are very significant for improving quality and reusability of OER such as: fast feedback, self-motivation, self-guidance, sensemaking, community-generated knowledge and collective intelligence.

There are, however, many important issues to be considered for producing OER using social media such as:

- Communities of practices who share clear and useful ways for co-authoring OER.
- Professional development for educators creating and reusing OER
- Peer review process to assure quality of OER.
- Participation of colearners in selection, reuse and adaptation of OER.

Some barriers observed in this study described by participants which were discussed in the Tool-Library, Facebook and Twitter:

- Lack of time for managing various social networks environments as well as exploring and getting accustomed to the Tool Library.
- Difficulties in the use of collaborative technologies, including finding and selecting relevant OER tools.
- Lack of information about open license, OER and ways to convince the participants' institutions to participate in the OER movement.
- Low experience in creating and sharing OER reuse and low understanding of the benefits of OER and potential impact.

This research work based on OPENSCOUT tool-library is a starting point for new investigations. There are diverse themes presented in this chapter, in which the COLEARN community is interested in, such as investigating:

- Social network analysis developed by its own users.
- The process of creating and adapting meaningful images.
- Useful strategies to facilitate adaptation and dissemination of digital films.
- Visualization methods through maps for colearning and research.
- Key issues for designing OER by integrating open educational components.
- Collaborative ways for reviewing and disseminating a collection of OER.

## 8-CONCLUSION

This research has presented meaningful ways of collaborating using social media for co-authoring OER. Social media play several key roles for improving quality, encouraging reusability and propitiating rapid dissemination of OER.

This study also outlined key challenges that might emerge when co-educators and co-learners produce OER collaboratively through social media, such as: time management, technology skills, clear understanding of open licenses, enough practice related to OER: reuse, revision, remix and redistribution.



Three important questions were presented at the beginning of this chapter. Some key topics can be summarized below:

What is “colearning - collaborative open learning”?

- Collaborative Open Learning through OER and Social Media.
- Learning together in different open ways through social networks.
- Collective Learning not only from accessing content but also from the experience of reconstructing them by integrating their own interpretation as well as getting feedback from their social networks.
- Changing the role of teachers and students from dispensers and receptacles of knowledge to colearners - collaborative partners on the process of sensemaking, understanding and creating knowledge together.
- Acting toward student- centered learning as well as building a more genuine “community of practice” through dynamic and participatory engagement for collective construction of knowledge.
- All these features highlight the importance of colearning where co-learners play significant roles such as: co-authoring OER, sharing collective feedback and reviews, co- orchestrating their learning production and process as well as disseminating collaborative learning paths.

Why is colearning important in this digital age?

- Increasing the opportunity for co-authoring OER.
- Promoting the collective sharing of feedback and reviews.
- Motivating users to co-orchestrate their learning production and process.
- Contribute to disseminate knowledge, practice and colearning paths.

How social media and OER can support co-Learning?

- Global audience dissemination.
- Instantaneous responses and editing.
- Availability for any web user to contribute.
- Easy-to-use interface.
- Low cost.

Future research will report progress on important issues mentioned in this study regarding social network analysis, reusability tracking, new strategies and methods to facilitate OER co-authoring and collaborative learning. Everyone is invited to participate in this process through various spaces in which our OER and Social Media networks are expanding:

**Twitter:** @colearn

**Facebook grupo:** COLEARN

**Blog REA:** [oer.kmi.open.ac.uk](http://oer.kmi.open.ac.uk)

**Flickr:** [coLearn-coAprender](https://www.flickr.com/photos/coLearn-coAprender/)

**Wikimedia Commons:** [colearn](https://commons.wikimedia.org/wiki/File:colearn)

**YouTube:** [Colearn's or Coaprendizagem](https://www.youtube.com/channel/UC...)

**AVA:** <http://labspace.open.ac.uk/colearn>

**ELGG:** <http://openscout.kmi.open.ac.uk/tool-library/pg/groups/839/colearn/>

**Web Videoconference:** <http://fm.ea-tel.eu/groups/colearn>



## GLOSSARY

**Elgg** is [open source social networking](#) software that provides individuals and organizations with the components needed to create an online social environment. It offers [blogging](#), [microblogging](#), file sharing, networking, groups and a number of other features.

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