Collaborative Environments to Foster Creativity, Reuse and Sharing of OER

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Abstract

The popularity of ICT within teachers has operated a shift between an individual way of producing resources to be used in class and a social way of doing it. Nowadays teachers do not have to be passive users, but reflective practitioners. To do so it is necessary to foster collaboration between teachers and find a way to improve the circulation of knowledge. We believe that Online Community of Practice could be a place in which, not only teachers can share their knowledge on their professional domain, they can also work collaboratively to create-reuse-remix-share Open Educational Resources (OER) to be used by everyone. Furthermore, Online Communities of Practice are the perfect place where the individual creativity and the social creativity can dialogue and give life to new Best Practices. This paper present a project called CREA.ti in which the individual dimension of each teacher is linked to the social dimension of its practice.

Keywords

Social Creativity, Open Educational Resources, Community of Practice, Pedagogy, Teachers' Education, Distance & e-Learning Methodology

Topics

Introduction

The current global economic crisis and the complexity of the information society are simultaneously affecting the education sector as well as other sectors in society across Europe. These constant changes have raised the need to develop new skills and remarked the importance of knowledge, innovation and technology as key elements in the future strategies (European Commission, 2010).

In this scenario the digital competences and ICT seem to play an important role. The importance of ICT for teaching and learning has been reinforced in the follow-up of the E&T 2010 Programme (European Commission, 2010), both in terms of digital competences as an essential life and career competence, as well as the enabling role of ICT for creativity and innovation. Despite information and communication technologies seem to be crucial nowadays, they are not enough. Next to digital competences, the increasing complexity of tasks and understanding needed for jobs requires developing transversal skills for collaboration, critical thinking, problem-solving, creativity and others. This will bring new challenges some of which are already emerging today (European Commission, 2010):

> *"the importance of transversal and transferable skills (e.g. learning to learn, creativity, innovation, collaboration, etc.) for future jobs, the crucial but changing role of teachers and the increasing value of informal learning"*

For all these reasons, and in particular to address the constant changes and the complexity of the information society, the teachers should develop new skills: creativity, ability to survey, and ability to learn in relation with peers (Olimpo, 2010), to be able to manage their knowledge as a social process.

On the basis of the foregoing, it is evident that **creativity is becoming a crucial skill to develop**, and

it is one of the most important tools for the production of new knowledge and more generally for self-learning (Ferrari at all., 2009). In this context, when we talk about creativity we refer to the ability to deal with change, the ability that we put in place when we address new problems, when we invent new strategies to tackle them. The creativity is also important to create new knowledge: we are able to increase our personal knowledge if we are able to integrate different point of view and knowledge that is produced in different contexts (Olimpo, 2010). To reach this goal is important to develop new personal synthesis that rely on new forms of abstraction or generalization.

The develop of creativity inside the educational system is not simple, but it is possible, and according with the context reported above, it is clear that new technologies and social networks are important means to reach this goal and Internet seems to be a good training environment to develop this skill. One of the most important effects on learning coming from the Web development was the dissemination of *Open Educational Resources (OER)* (Seely Brown & Adler, 2008). This term was coined during the UNESCO's 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries:

> *"The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes" - UNESCO (2002).*

Nowadays there is a growing consensus that a definition of OER needs to incorporate three interrelated dimension (Mackintosh, 2011): educational values (OER should be free), pedagogical utility (OER should embed the permissions of the reuse, revise, remix and redistribute), and technology enables (technology and media choices should not restrict the previous permissions).

Aware that the users are no longer just consumers, but they actively participate in the process of building the knowledge and they influence it, according to the concept of peer production (Auvinen, 2009), **Open Educational Resources may offer enormous potential in supporting the development of creativity**, as they can be used and reused by teachers and learners in a range of contexts; contexts of both formal, non-formal and informal learning, as well as contexts of both individual and collaborative learning in relation to both product and process.

The process of reusing, revising and remixing a resource can be a key strategy not only to develop creativity, but also to learn or access the same content in a multitude of different way, taking into account that different learners have different learning styles. As explained in the next sections, social software and group structures in web-based communities could be an amplifier for this process: greater will be the collaboration between teachers and the sharing of goods practices and resources, easier will be to foster creativity and lead to customizable educations.

Creativity: a goal to reach in community

Who knows everything does not exist anymore. As mentioned before, we cannot rely only on ourselves when talking about knowledge, but we must be able to integrate different point of view and knowledge that is produced in different contexts. As underlined by Shön (Shön, 1995) the problems that a practitioner has to face in his/her daily work are becoming more and more complex. To challenge this complexity the knowledge possessed by a single human being cannot be enough. Therefore we need a framework that allows us to share our insight on our practice with other peers.

Italian teachers nowadays encounter a lot of difficulties while doing their job. Economic resources are decreasing drastically and research is not supported, as it should be. Immigration is changing the composition of classes so that the teachers are forced to rethink their way of teaching. Obviously this is a process that involves investing a lot of time and efforts. Such efforts could be diminished if the teacher could work in community with its peers. To be able to keep pace with the changing world teachers must be able to use their personal experience and their creativity to innovate their profession. How can a teacher be creative if he/she has to work until late in the evening just to prepare the materials to be used during classes? (Nonaka & Takeuchi, 1995).

We believe that the creative process, which is fundamental to increase the efficiency of every profession, is social. Therefore the best way to make the most of one's creativity is to share it with the others, for instance collaborating in production and revising of new resources, in environments that permit users to share their best practices with peers who have different experiences but common interests.

Social creativity is enriched by the fact that the members of an online community come from different places and have different cultures and backgrounds. Bringing spatially distributed people together becomes important because this merging supports the shift that shared concerns rather than shared location becomes the prominent defining feature of a group of people interacting with each other (Fisher, 2005).

In addition, these communities are multi-disciplines in the sense that every member will bring inside the community not only his/her experience on the teaching field, but also knowledge acquired during a lifetime from other areas of interests that are not strictly related with the profession.

Creativity helps to explore what stays under the real of the unknown. It involves producing decisions that

are not expected. Creativity is an essential part of the learning and participation that are fundamental activities of both online and in presence Communities of Practice. We are talking about the generation of new ideas, the passing of knowledge from member to member, the engaging with teams of peers and the fostering of collaboration.

If teachers have enough common ground to mutually engage themselves, if they have a good dose of diversity that could lead to a richer learning experience then they could find interesting relationships with other peers and, furthermore, an increment of their creativity (Wenger, 1999).

> *"The ability to include both structures and dynamism, to walk the line between chaos and order, is a characteristic that makes communities of practice a likely locus of creativity." (Wenger, 1999).*

Community of practice: from solo practitioners to teams of connected educators

Appropriate teachers interactivity inside an Online Community of Practice (CoP) enhances information sharing, promotes and rewards teacher creativity and group-initiated practice improvement while minimizing problems of service fragmentation. In each member of a Community of Practice creativity is a characteristic that he/she already posses. Probably creativity is the reason why they decide to be members of a CoP at first, it is the trigger that make them understand that there can be more then individual work, that the individual creativity can walk along the social creativity (Fisher at all., 2005). When we decide to participate as active members of a CoP we unconsciously declare to ourselves that we feel that something is missing in our professional life. It can be the lack of dialogue with the teachers of our school or the difficulty to find Open Educational Resources that could be useful in our particular situation. The process of knowledge building inside a Community of Practice is based on the collaboration and the dialogue between the members. The interaction among them helps the development of creativity because every member does not have only himself/herself as interlocutor but a community of professional in the same field that knows the domain of knowledge. Under this view, communities of practice are both a point of arrival and a starting point for one's creativity.

Wenger often discuss about Identity. According to his work on the CoP (Wenger, 1999) just being a member of a CoP changes our professional Identity. But by changing our Identity we are able to interfere with the community identity to change it. We can apply the same loop to creativity since it is part of our identity and we not only share our knowledge of the domain but also our creativity. It is not a matter of learning how to be creative, because nobody can teach you how to be creative, it is more a matter of exploring our innate creativity, improve it and let it dialogue with those of other members.

The use of new technologies related to Web 2.0[1] allows to the Community of Practice to widen their area of action including virtual world. We think that, even if, online communities use internet technologies and members "meet" in virtual spaces created ah hoc, nothing inside an online Community of Practice must be labelled merely virtual. The exchange of knowledge and the interactions between members are real. In fact, as a result of these interactions among the members of the community, what is reified, often in form of Educational Resource, is tangible. The creative process can be reified and the outcome is something that can be used outside the community, in which it was produced, as boundary object. Online Communities of Practice can be the sources of motivation, innovation, creativity, and problem-solving skills that can contribute to create real value for the people involved in this sharing process (Wenger, 1999).

Furthermore, the teacher, while collaborating with his/her peers begins a process of meta-cognition that will help him/her understand better the work that has to be done in class. Online Communities of Practice for teachers are a place where there can be the encounter between different approaches, different teaching methodologies and different first hand experiences.

Communities of practice not only helps people to share what they know, they help members to go further by enabling the creation of something new, something that could not be foreseen before. Sharing knowledge trigger a process of innovation and creation of new knowledge that can be, at the end, reify.

Clearly, Online Communities of Practice cannot teach their members how to be creative, they cannot provide the teachers with a toolbox that they can use to learn how to be creative. We believe that the Communities of Practice are an ideal place to show one's innate creativity. The union of all the creativity flows inside the CoP is fundamental to give importance to the process of creation of Open Educational resources.

CREA.ti: flexible environment where train teachers in sharing and doing together

Collaborative environments, like Communities of Practice, are not only important to foster creativity and

create, use and share OER, but are the basis for a new teaching model.

As highlighted in the "National Education Technology Plan 2010" (U.S. Department of Education, 2010), promoted by Obama administration, it is important to move toward a new connected model of learning for the 21-century,

> *"the model of learning calls for using technology to help build the capacity of educators by enabling a shift to a model of connected teaching. In such a teaching model, teams of connected educators replace solo practitioners, classrooms are fully connected to provide educators with 24/7 access to data and analytic tools, and educators have access to resources that help them act on the insights the data provide."*

based on teachers' community and the availability of courses and resources for the professional development.

> *"Online communities should enable educators to take online courses, tap into experts and best practices for just-in-time problem solving, and provide platforms and tools for educators to design and develop resources with and for their colleagues."*

This is a great challenge for the educational system: to promote a new way of learning and in particular the ability to learn in relation with the others, it is important to connect all the environments in which the learning takes place (formal, non formal and informal).

New collaborative and flexible learning spaces were created to reach this goal, for a lifelong learning education in the future knowledge society. These learning spaces, digital or physical, put users at the centre of learning, but, at the same time, conceive learning as a social process, where users become co-producers and not just consumers of learning content. In these learning spaces the role of teachers and tutors remain very important: it change, but it does not disappear (European Commission, 2010).

This scenario and a long experience of teachers' education (initial and continuing training through national and European / International projects) achieved by CIRDFA[2], were the basis for designing the OPEN EDUCATIONAL RESOURCES project UNIVIRTUAL (OER-UNIVIRTUAL). The project aims to introduce a teachers' training approach that founds on the efficacy of open educational resources, interweaving them with flexible and collaborative learning environments regarding learners' interest in the use and reuse of resources (Raffaghelli & Tosato, 2010a).

According to the ideas reported above, OER-UNIVIRTUAL aims at providing an open platform (CREA.ti[3]) where teachers can download open educational resources stored into the CIRDFA's database[4], and access to learning management system (LMS)[5], that offers a set of virtual environments where teachers can interact with peers and with tutors about specific topics of interest, and learn how to create and describe educational resources collaborating and sharing their practices with other users (Figure 1). CREA.ti is not just an environment designed as a learning network for strengthening the use of OER, but also an application which suggests particular training paths to the users, according to their profile and the resources downloaded (Raffaghelli & Tosato, 2010b). Therefore, participation is stimulated in several ways, according to users' profiles, from the simple download of an object, to learning activities of expansion and spread of knowledge and practices.

Figure 1 CREA.ti and flexible learning environments

Conclusion

The new challenges of the information society lead to a new profile of teacher competence: teachers have to interact with a knowledge that is accelerated, globalized and complex and with students having new features. This is the reason why, during the last years, a lot of efforts have been done in the teachers' role,

to transform them in reflective practitioners and active actors of the innovation process, to increase the quality of education (Goodson, 2003; Hargreaves, 2003; Darling-Hammond & Bransford, 2005). In this process, creativity has been highlighted as a key digital literacy skill that is needed by today's and future learners and teachers.

Despite Internet seems to be a good training environment to develop this skill, we cannot hope that this process happens with a spontaneous use of the Web; it is necessary to design and implement specific learning situations, that are based on OER and Communities of Practice. In particular, the creation of environments where the users can interact and share best practices seems to be the best way of enhancing creative learning processes through effective use of OER.

The challenge here is not only to provide a system that promotes opportunities to be involved into activities of using, remixing and creating of educational resources, but maintain motivation in sharing digital resources and in participating in these communities, extending the perspective of Open Education within one's practice, as part of a professional challenge (Raffaghelli & Tosato, 2010a).

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[1] Web 2.0 is a term describing the trend in the use of World Wide Web technology and web design that aims to enhance creativity, information sharing, and most notably, collaboration among users (Wikipedia)

[2] CIRDFA stands for Centro Interateneo per la Ricerca Didattica e la Formazione Avanzata (Interuniversity Center for Educational Research and Advanced Training), is an italian center which from several years have developed training strategies and research in the field of adults and educators/ teachers training.

[3] http://cird.unive.it/oer/, last visited January 2011

[4] http://cird.unive.it/dspace/, last visited January 2011

[5] http://www.univirtual.eu/PLE/, last visited January 2011