
# E-Learning 2.0. A case study on a growing community

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## Abstract

This paper describes and discusses the case of a community supported by web 2.0 tools, focusing on its origins and on some of the internal dynamics which characterize it. Although further research is still ongoing and despite the peculiarities of the community considered, there are some elements which suggest that such systems can play a significant role in Lifelong Learning (LLL).

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## 1 Background

Over the last years some concepts have emerged concerning the evolution of learning inside organizations and the impact of technologies on the interactions through the net.

The main features of this background are:

- lifelong learning: the idea of learning throughout the full course of life is now consolidated[1];
- informal learning: there is an increasing awareness that learning occurs for the most part outside the traditional formal situations (Cross, 2007);
- Web 2.0 and social software: the web is evolving towards new forms of participation enabling a large crowd of users to share resources and build conversations, and this is leading to the new concept of e-learning 2.0 (Downes, 2005). The notion of e-learning 2.0 could be useful to understand how these very new affordances of the net would have an impact on learning;
- Connectivism: the theory of Connectivism (Siemens, 2006) has been recently proposed as a new theoretical paradigm, able to explain the learning modalities that are peculiar to networks[2].

If we compare these background elements with the one which characterized communities of practice and their online version, it has to be noted that they are not an absolute novelty (BBS were active before the dawn of the Internet) and that virtual communities and networked collaboration have been widely investigated (Rheingold, 1994, Trentin, 2004, Calvani, 2005).

However, what we are questioning is whether or not the above-mentioned elements could introduce significant changes on how communities rise and grow, and on the real nature of these communities.

The experience here presented started off from this framework as an opportunity to investigate whether an e-learning 2.0 environment (Bonaiuti, 2006) is fit for the purpose of supporting a self-sustaining community.

## 2 The context and the beginning of LTEver

The Educational Technology Lab (LTE) is made up of professors working at the University of Florence and external experts who for more than ten years, have been carrying out courses for educators training on educational technology. In January 2007 LTE started the initiative named LTEver, which is a virtual community for staff, students, alumni, contributors and teachers. The name is a little pun, with the suffix “ever” (for ever) to suggest continuity.

Usually, when a course ends, virtual classrooms, forums and other environments turn off: users are not motivated anymore to connect to the platform,

1 On Lifelong Learning see Je-LKS’s thematic issue (Je-LKS, 4, 1, 2008).

2 For some comments on Connectivism see Calvani (2008).

teachers have to deal with the new edition of the course, etc. Briefly, the intentions to keep in touch and build a community, that often characterize the group of alumni and teachers, do not produce real effects, and to some extent this is due to the lack of effective technological support tools. Of course, there are also other obstacles, but maybe the technical ones could be faced in an easier way.

It is clear that the traditional LMSs are not fit to support these initiatives: they offer a learning environment which is available only for the duration of the course. Furthermore, they generally provide only limited personalization and control features. In the majority of cases, users cannot have their own personal space, and they neither can decide the levels of access to their data (Fini, 2007).

## 3 Elgg: a 2.0 social tool

All these requirements have led to focus on a recent field of research highlighting the concept of Personal Learning Environment (PLE) (Attwell, 2007 and Wilson, 2005) and, particularly, a system which has reached a certain maturity[3] and promises to be particularly suitable to be tested as a working environment for the community. The system, called Elgg[4], is available as Open Source licensed software, and is evocatively called by its authors, a learning landscape, i.e. a system that, starting with basic elements such as blogs, e-portfolio and social networking, is able to promote reflection, socialization in learning communities (Tosh and Werdmüller, 2004). Equipped with a lightweight and expandable structure, based on standards such as RSS, Elgg includes a system which manages a blog and a repository of files and also supports and develops social relationships. In particular, it offers the possibility to create sub-communities and describe the user's profile, which is useful for finding people with similar interests and goals.

LTEver offers students, former students, faculty and LTE staff the possibility of freely managing their own personal space, which can be used during the courses and even after. For example, those who do not have a blog yet can start by building one, while those who already possess it can easily integrate their blog as a repeater in the LTEver system .

Two Elgg peculiarities, which characterize it, are crucial for the development of LTEver, when compared to other types of content and knowledge management systems:

- freedom of action: when the space is activated, users can freely configure

3 Elgg sites are active in some universities, schools and training organizations worldwide. The cases of the University of Brighton (GB) and the Athabasca University (CAN) are particularly relevant.

4 http://elgg.org.

it by including information into their profile, adding RSS feeds from other sites, building communities, sharing files and calling for new users to join the community. There are no specific roles like in e-learning platforms: every user stands on an equal footing;

- attention to privacy and confidentiality, obtained through a simple mechanism: control of access. For every piece of data published in the space, the allowed level of access can be determined by the user, who can decide between "public" (open access to anyone on the web, useful for creating a public blog) and "private" (readable only by the user) access, with various intermediate levels.

Moreover, LTEver is connected to the LMS (Moodle), where students can find, within their virtual classrooms, links to the recent activities in LTEver (comments, new blog posts, etc.). The connection also allows a SSO (Single Sign On), without asking for a double registration. The intention is therefore to offer students and former students, as well as collaborators, a multi-functional environment, to be used as a main personal website or to connect to other personal sites, with the specific purpose of keeping in touch with colleagues and friends (Calvani *et al*, 2007).

## 4 LTEver: some descriptive data

To understand the meaning of the data here presented, it is necessary to take into account the specificity of this community, i.e. the background of its users. The majority of the LTEver users are graduates or have high levels of education and familiarity with information technologies. They are interested in technologies and their impact on education. The start-up of the community took place with a message sent to about 250 people, employees, students and former students. About half of the recipients asked for registration on the site and immediately began to interact. In late March 2007, three months after its launch, users were given the option to invite other users, while the possibility of self-registering was still precluded. The community has therefore taken a connotation of a semi-open professional environment with regulated access through a sort of co-optation by those who were already inside. This audit was intended as a guarantee of quality: it gives confidence to the other participants in the system because, implicitly, everyone knows that others have been invited by the institution or by other “trustworthy” users. This is the reason why LTEver is very different from other open social networking systems, such as MySpace or Facebook. Some quantitative information, derived from the system log and database, at different times, can help to get an idea of the size of the community and the dynamics of interactions:

TABELLA 1

| | Until 31/7/2007 | Until 31/12/2007 | Until 31/7/2008 |
|---|---|---|---|
| **Registered users** | 207 | 248 | 278 |
| With at least one connection | 161 (77%) | 201 (81%) | 229 (82%) |
| With at least one connection during the previous month | 63 (30%) | 54 (22%) | 50 (18%) |
| With at least an info in their profile | 74 (36%) | 91 (37%) | 103 (37%) |
| **Blog posts** | 434 | 835 | 1336 |
| From external blogs | 178 (41%) | 394 (47%) | 830 (62%) |
| Users who entered at least one post | 47 (22% of users) | 62 (24% of users) | 67 (24% of users) |
| With at least one comment | 196 (45%) | 361 (43%) | 435 (33%) |
| **Messages (posts+comments)** | 967 | 2103 | 2817 |
| Users who entered at least one post or comment | 52 (25% of users) | 76 (30% of users) | 84 (30% of users) |

From this data we can see how the growth of the number of users is constant, but with a rather low trend. It depends on the mechanism of invitation which regulates access by new members. Participation seems to have a slightly negative trend, as shown by the steady decline of the number of connections and the decrease in the percentage of comments posted in the blogs. Considering the fact that blogs are the main communication tool in LTEver, this data on posted comments deserves to be carefully observed, On the contrary the number of users who actively participate has a positive growth (from 25% in July 2007 to 30% in July 2008).

The number of posts from the external blogs is also interesting. As explained above in section 3, every user who already owns a personal blog can activate an automatic replication of his/her blog through the LTEver blog. This practice has been adopted more and more by users. This suggests that LTEver is not experienced as a primary point of presence in the net, but as a place where a repetition/amplification of one's own web site can take place. In addition, as a

further confirmation that there is a certain awareness of the specialized nature of the community, 14% of those who use this technique states that they do it using a filter: not all the blog posts appear in LTEver but only some of them, depending on the criteria set by the user.

Following a post from the Twopointouch blog (Delaney, 2007), which dealt with the problem of participation in social media, the following parameters were calculated for LTEver:

- 65% of contributions has been created by 10% of users;
- 58% of active users posted less than 10 contributions;
- 29% of users posted just one contribution.

It is possible to compare this data with the so-called "1-9-90 theory" (Nielsen, 2006), according to which, in the majority of communities, users can be classified as follows: about 1% of participants are active and productive users, about 9% are occasionally active users and the remaining 90% are passive users. In our case, this rule seems to be partly confirmed: on one hand, there is a strong concentration of participation in a small group of users; on the other hand the percentage of the occasional contributors is larger than that verified by Nielsen .

Finally, if we consider a "conversation" as a set of messages (comments) generated by an original post, it can be noted that the total duration of the conversation, in number of days between the first and last comment, during the first year of the community's life, does not exceed 7 days in 88% of the cases, does not go beyond 3 days in the 66% of the cases and runs out on the same day in 17% of the cases. There seems to be no correlation between the number of comments to the post and the duration of the conversation.

The first comment to a post is usually inserted within a very short time (in 46% of cases on the same day and in 89% of cases within 3 days). The time very rarely exceeds 15 days there are some cases of more than 30 days and only one that seems totally abnormal, i.e. 124 days)

## 5 Principles and conditions for a 2.0 community

The basic working principle of a 2.0 community is that a group, as a network that shares common interests, can find sharing information and resources with other components useful. The common point of interest, in this case, is represented by topics related to "technology and education". Even though this is a broad area, it suffices to narrow the field and provide a form of pre-selection of information. Here we are going from one extreme to the other: on one hand, the issue of information overload is a constant risk; on the other hand, the desire/need to learn and be updated on one or more topics motivates people to participate in the community. Serendipity plays an important role: by reading

blogs or from RSS feeds containing posts by all other users, participants can find relevant information for their business. A pivotal concept here is that of trust and reliability: users can find elements that support or do not support the reliability of a resource, basing themselves on the knowledge and reputation of the colleague who proposed or used it.

Having an idea of the sources used by colleagues (for example, RSS) also provides an indication of trust. The reasoning sounds like «I can trust what I read on the site abc.com because so- and-so, who I know is a reliable and competent person, evaluated it as reliable because it is registered in his resources». Even the mechanism of discovery can be supported in this environment: «I am interested in knowing through which sources a certain person keeps himself updated, because that person is reliable and competent . I try to read everything he reads.» We are not dealing with a literally collaborative or cooperative environment: it is rather a network, which is not explicitly interested in institutional learning or formal curriculum, but in informal learning based on micro-content (Masie, 2006).

## 6 Some final considerations and a provisional conclusion

Several research activities based on different methodologies or perspectives, are being conducted on LTEver: quantitative studies on data obtained from log and qualitative research based on textual conversation analysis; studies focused on interactions through the SNA (Social Network Analysis), which enables us to study and observe social grids (Mazzoni, 2004), in collaboration with the University of Bologna; lastly, research on usability, in collaboration with the Advanced Interfaces Laboratory, Department of Psychology at the University of Trieste (Rigutti *et al*., 2008).

Although it is early to draw conclusions, we can already highlight some strengths and weaknesses, from the LLL perspective:

In terms of weakness, we can observe the following issues:

- some information overload is due to the natively chaotic structure of the informal blogs that, yet again, are the main tools in Elgg:
- some problems of usability of the system (Rigutti *et al*., 2008);
- active participation seems to be restricted to a relatively small number of users; even though this is a documented phenomenon for the majority of social media, this could represent a big problem in the case of a small and highly focused professional development (Calvani *et al*., 2008);

As for the positive indications, we can underline the following elements:

- quality of contributions: grounding on an initial analysis, the “level of noise” (i.e., the number of off-topic or irrelevant posts) is considerably lower than the one characterizing the generality of the blogosphere. There-

fore it can be derived that the community would play an important role in effectively filtering information so that many users would consider it useful for their business[5];

- steady trend of growth of users and posts: up till now there are no signs of tiredness or loss of confidence in the system;
- specific initiatives: within the LTEver some spontaneous initiatives developed such as the participation in the online course "Introduction to Open Education", based mainly on structured communities (Fini *et al.*, 2008). This suggests that 2.0 communities could play a fertile role for more structured activities.

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5 According to surveys among users, 59% states that the community has an effective role in sharing professional information.

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