Open Source LMS and Web 2.0 for supplementary teaching: an experience

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Abstract

The aim of the present paper is to discuss the achievements and the drawbacks of the integration of LMS (learning management systems) with the cooperative tools of the Web 2.0 through the account of a supplementary online course that has taken place in an Italian secondary high school. It can be considered an innovating experience from many different viewpoints and can be regarded as an example of how the world of the formal education can meet the demands of the informal one, in the broader landscape of school learning.

1. The idea

The idea of creating a summer course for High School (Liceo Scientifico) students through the use of the Web (http://www.liceodaprocida.net/users/recuperareconilweb/spazioweb/) was born in June 2007 as a response to the learning needs of some students who had to improve their school results in English as a foreign language by the beginning of the following school year. Article No. 4 in D.M. No. 42 of 22nd May 2007 regarding school credits and debts in Italian High Secondary Education allowed schools to organise summer courses for the students who needed to improve their preparation in curricular subjects, even in an innovative way and cooperating with other schools (MPI, 2007a). It was decided to exploit the availability of an open source LMS from another school (Liceo Scientifico "Da Procida" in Salerno, www.liceodaprocida.net) and the presence of a popular online helpdesk for English as a foreign language carried out on a blog (http://sportelloing.blog.tiscali.it) plus a podcast (www.quadripodcast.it) to ask the students to choose between the supplementary summer learning activities traditionally offered by the POF (Formative Offer Plan) of my school and the participation to an online distance course. The latter alternative was chosen, probably for the presence of their teacher as an e-tutor.

An online supplementary course can thus represent a further opportunity among the traditional ones offered by a school to help students solve their learning problems. However, it should be regarded as integration, not as an alternative, to ordinary teaching practice.

2. Organizational aspects

The project was developed with a pragmatic approach, through the exploitation of the technology and resources already available at school: LAN, Internet connection and open source e-mail programme, with materials and webtools freely available on the Internet and personal materials. Then, a repository of lessons, activities and learning objects was created on the LMS with an individual login for the participants.

After the attendance of a trial lesson where the students were asked to familiarize with the technological tools and resources on the platform, an instructive agreement was signed by the students who accepted to participate to the learning activities responsibly, to interact in group work and to accept that their papers were published on the LMS to be checked and assessed within the project.

The project objectives were essentially linguistic and pedagogical:

- to revise the syllabus and improve the students' competence in English literature;
- to overcome the learning difficulties in some language strategies;
- to recognize the importance of cooperative learning in one's personal growth;
- to acquire new learning tools for writing in a cooperative way;
- to help students become active and co-participative involving them in group work;
- to stimulate peer confrontation and horizontal scaffolding.

From the didactic viewpoint, the integration of formal education as it is provided by LMS and informal learning as it can be found in the cooperative Web 2.0 embraces the principles of Constructivism and Socio-constructivism with its theory of cooperative learning viewed as an interactive process through forms of social interaction and negotiation where people learn from one another.

Moreover, after the success of the so called Web 2.0 which is characterised by a more and more active role of the users in the production of contents, some authors have started to criticize the distance learning approach based on the exclusive use of LMS and foster new types of approach (Cross, 2006). The objective to attain for an effective e-learning is the integration of different kinds of knowledge acquisition, from formal to informal, as it happens in traditional learning. So, it was chosen to integrate the experience of the online knowledge management and formal e-learning activities with others deriving from informal e-learning because of the strong motivation that drives towards what has come to be called "e-learning 2.0" (Downes, 2005). E-learning 2.0 requires a new way of considering e-learning. It is not a technical question but a methodological issue, in other words it deals with the opportunity of becoming authors in the web as well as readers by means of the creation of blogs and podcasts, photo and document sharing and so on through any kind of social interaction (Fini, 2007).

Thanks to the tools of the Web 2.0, the traditional distance practice based on the transmission of contents is turned into a more stimulating, appealing interactive process, an aspect of great importance in one's motivation towards learning.

For all these reasons it was decided to prepare only a small number of modules and activities focusing the attention on the needs and difficulties on which the students were most in trouble during their learning process, even on the basis of the specialist literature on the topic (Calvani et Rotta, 1999). This choice proved to be appropriate, and in fact it was appreciated in the feedback about the project.

3. The learning environment

The notion of learning environment changes considerably from the traditional learning situation where there is a strong vertical interaction between teacher and learner.

The teacher is seen as a facilitator, an assistant on demand who does not intervene in his/her students' choices but is always available and sensitive to their needs, who is learning to use the technological resources available on the web in a parallel process together with his/her students. Learning languages in the Web 2.0 implies a different attitude by teachers. "The task of teachers is to create a multimedia learning environment which means to structure and to organize the learning process." (Donath, 2008).

Horde (http://www.horde.org) the open source LMS from which the online supplementary course has been implemented, is a piece of software and a project that comprises a set of

Web-based productivity, messaging and project-management applications, each of which allows communication, interaction at different levels and in different ways, cooperative work and learning, document sharing and much more. One of its best achievements is its ergonomics, as its use is very simple and intuitive.

The figures provided by the platform are the administrator, the user, the forum moderator. A particular importance is devoted to group work with the provision of a "work area", a forum, a wiki, a web public area besides a personal one.

In other words, Horde is a learner-centered but substantially formal learning environment. The use of a blog, instead, meets the demands of an informal learning environment where further peer interaction and the sharing of experiences, problems, learning achievements are allowed, something that is particularly appealing and motivating for teenagers, many of whom are passionate and experienced bloggers. By the use of both technologies, the condition for effective e-learning through the integration of the formal and the informal dimension is fulfilled.

The learners' position changes as well. While in a traditional classroom activity students learn passively from texts, in this learning context they use an environment that is congenial to them and contribute actively to it on the basis of their different technological and linguistic competencies. Students can organize their own learning times, spaces, modalities with great flexibility, integrating formal and informal learning occasions. If they are shy in a traditional learning environment, the mediation of a computer and the Web 2.0 help them have fewer inhibitions and decrease the factors that create psychological barriers. Horizontal scaffolding can be a major advantage for learners because it cuts down anxiety and helps develop self-confidence.

4. Results and evaluation

The results of the experience were assessed through a traditional written and oral test carried out at school together with other students who had to take an extra exam before the attendance of the following school year. Four out of five students got positive results and did not show any particular foreign language problems in the following school year. However, this experience has given the opportunity of assessing not only the students' final preparation after the course, but also their learning process through the monitoring of their activities on the platform.

For the assessment of the project an online questionnaire was provided (http://www.farnt.unito.it/trinchero/qgen/richiama.asp?codice=elspad_rec), using an online questionnaire generator implemented by prof. Roberto Trinchero at the FAR (Formazione Aperta in Rete), Turin University. The evaluation of the project has been positive. Besides the recognition of the validity of such a kind of learning experience as an effective alternative to traditional teaching practice, it was suggested to extend the experience to the rest of the class during the following school year as a form of integration of traditional teaching activity and revision for the final diploma examination. Only one student did not see any utility in such a project and another did not consider the quality of the expression clear enough.

The new project has involved the whole class and other two classes from other two licei in other parts of Italy (http://www.liceodaprocida.net/users/cooperareconilweb/spazioweb/#inizio) and has also received a good feedback from the students in the final evaluation questionnaire (http://www.farnt.unito.it/trinchero/qgen/richiama.asp?codice=elspad_coop), whose results are shown in figure 1.

Class 5 AI: evaluation questionnaire, June 2008
3 = very much
2 = enough
1 = little
0 = not at all

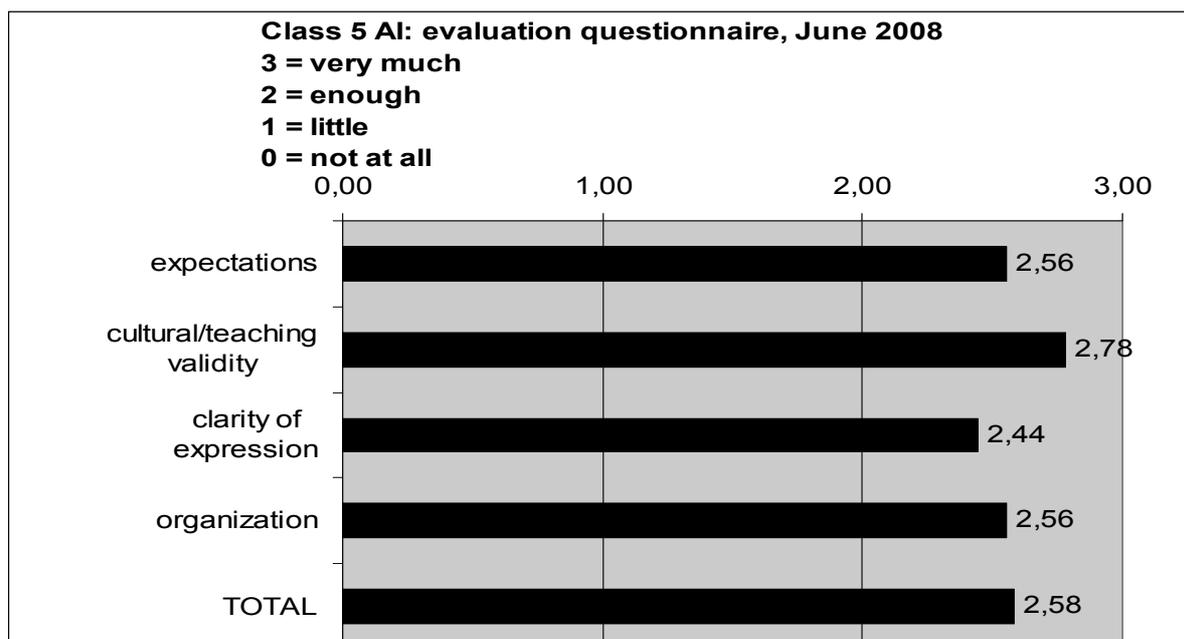| Category	Value
expectations	2,56
cultural/teaching validity	2,78
clarity of expression	2,44
organization	2,56
TOTAL	2,58

Figure 1

The positive aspects of the experience have been the enlargement of the learning offer; more interest in the integration of the studying of literature; more efficacy of the retrieval and strengthening process; a higher degree of autonomy in the learning method; the improvement of some linguistic skills; increased motivation in the approach to the foreign language and/or the use of modern technologies for educational purposes.

The negative aspects have been the students' laziness who prefer to talk to the teacher directly without the intermediation of an e-mail; the necessity of a constant production of learning materials; a great organizational effort compensated for by a very modest budget, as the 'Decreto Fioroni' does not recognize online supplementary activities explicitly; difficulty of humanising the virtual relationship between students and teacher; the risk of silence; disrespect for times and difficulty in meeting the deadlines; the e-tutor's loneliness in assuming his/her teaching responsibilities and making his/her educational choices.

5. Conclusion

Without pretending to offer a universally valid answer to the problem of the effectiveness of the use of LMS and the Web 2.0 in teaching practice, the experience described in this paper points out that their progressive introduction can represent a further learning opportunity in both teaching and learning. This does not imply that being able to use the new technologies leads automatically to the acquisition of an effective technological competence as the one required in the current guidelines for compulsory education in Italian schools (MPI, 2007b), but the use of ICT can offer some opportunities that can be seized in the same way as a rich semantic-lexical competence can favour deeper thinking abilities. The challenge is now to keep the students' interest towards this learning experience alive, perpetuating it in time and adapting it to their educational needs.

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