Applications

Blogroom: how to enhance a university classroom using Web 2.0 tools

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Abstract

The work describes the methodological evolution and pedagogical reasons that have enabled the implementation, in 2007/2008, of a blogroom to teach computer science in the University of Florence's College of Medicine. An innovation that decidedly upsets the traditional teaching approach by using free or low cost tools but, more importantly, by making students active in their own education.

1 At the heart of the experiment: how the idea of a blogroom came to be and why

All the great innovations born in the third millennium have come from the bottom up. The task of institutions and organizations must be to create the appropriate background to let new phenomena arise spontaneously, instead of driving them directly. Codification, regulation and institutionalization come later. Innovation is both complementary and contrary to organization because it requires the freedom to upset and give up what in the past ensured success (Alter, 1999). Innovation, stresses Dejean (2003), is to answer questions in a context where problems to solve and targets to achieve may also be entirely new for the existing organization. From what problems and with what prospects does the methodological innovation described here come to be? In the teacher's blog ("Insegnare Apprendere Mutare" [1]), we read how the teaching load, (from 2000 to now, about 500-700 students a year, in 20-25 curricula) and the spread of locations (6 different locations within a radius of 100 km) prompted him to search for an alternative solution to the conventional university teaching, which could guarantee - under these conditions - the quality of teaching.

For that reason it develops a new method in three phases.

- Phase I: 2000-2003. Website created with all the content needed to take the exam. Conventional scheme based on a series of lectures and final exam. First attempts to use Web tools to improve communication with a large group of students. Involvement of the best students in the development of teaching materials. Mandatory self-evaluation test and survey for assessment of the course. Final exam with online quiz and bibliographic research test on the database of medical literature.

- Phase II: 2004-2006. Course transferred to a platform for e-learning, first ATutor and then Moodle. Conventional scheme abandoned in favor of a blended method: one or two conventional lectures, independent study, perfusing (*liquid*) presence of teacher via the net and in computer classroom through individual conversations, discussions with groups, seminars, and lectures on request. More emphasis on doing and on participation of students. The rest is the same as the previous phase.

So, the evolution of the method in the first two phases, leads to the gradual abandonment of the stand up lecture through a "liquid presence" of the teacher and an increasingly active involvement of students. In Phase III (2007-2008), all activities were transferred onto free or low cost web services, blogs, wikis and other social networking environments. The paradigm of fixed time was abandoned in favor of that of fixed minimum quality: instead of a sequence lecture-study-exam-final exam, a series of independent and asynchronous activities is

1 URL: http://iamarf.wordpress.com.

proposed, some mandatory, others optional. The method involves the creation of a local blogosphere[2] (blogroom) and the transformation of conventional lectures into seminars**,** "cooked" in the blogroom, "consumed" in classroom and "digested" again in the blogroom. The teacher is present every day in the computer classroom, where he/she is available to help solve problems, discuss, improvise or arrange seminars, lectures and other initiatives. It is up to the students to request any action from the teacher when necessary. Notwithstanding the obligation to follow the teacher's blog posts of the teacher, which is the primary source of information on the course, students have the opportunity to take the exam conventionally, referring both to materials made available in and produced by the blogroom.

2 Characteristics of innovation

2.1 Course Philosophy

The course is focused on autonomy and personal initiative, on the aptitude to share and collaborate, on the ability to express and communicate. It is created for a world in which companies think less of grades and degrees and more of problem-solving ability and relational abilities.

2.2 Organization of the course and materials 2.0

The fundamental structure of the course is represented by:
- teacher's desk. Teacher's blog (http://iamarf.worpress.com). Is used to pace operations, to announce homework, to prepare the ground for the events, to comment on them, to teach...;
- contents. Wiki pages (http://infomedi.pbwiki.com), aimed at sharing and cooperation, they gather the basic content of the course, from which each one draws as needed and contributes when possible.
- forum. Collective blog (http://infomedfi.blogspot.com), for management issues and miscellaneous information.

To this is added: all the personal blogs of students, networked together through RSS feeds and the use (required by the teacher) of other tools like del.icio.us, twitter, Google maps, Anobii and StumbleUpon, for example.

2.3 General considerations on the "added value" of the experiment

Technically, a blogroom stems from a set of blogs and the appropriate use of RSS feeds but, obviously, this is not enough. The first thing that a teacher must do in a new blogroom is to create a mood in which all receive the value

2 The OPML file of the blogroom is available at: http://tinyurl.com/5mhsa8.

of sharing as the key driver of learning activities: the teacher teaches, but any-one can become a teacher as soon as he has learned something. The up front lecture and the seminar are the tools to create this mood, and they have to be designed for this purpose. In this context, the teacher's blog has nothing to do with what seems to be the hype about blogs in the mainstream information and in the blogosphere itself: yearning to tell, yearning to listen, voyeurism, egocentrism, exhibitionism, privacy etc. Instead it is a working tool, which has students as key, but not exclusive, interlocutors. The blogosphere generated by this group of students is a dynamic classroom with transparent and fuzzy walls and it merges with other blog communities in a seamless way. Consequently, the audience of interlocutors expands to other people interested in the same theme, teachers and school practitioners at all levels and in all countries of the world. Each of these blogs is a window to spot how others have done things, to talk, ask, answer, learn…

2.4 Summary of the strengths of innovation

- Breaking down of internal disciplinary and cultural walls**.** The blogroom includes students of all health profession degree programs, leading to collaboration between different categories of future health professionals.
- Transparency and openness to the world. It makes co-optation and the spontaneous cooperation of external teachers and the interdisciplinary approach easier: this article started as a dialogue between bloggers interested in raising the problem of the chronic inadequacy (structural and cultural) of our institutions to monitor changes in a world that is getting smaller at a frantic pace.
- Creation of a transition area between formal and informal education, with a goal of life-long learning. For some students the blog is a discovery and they continue to use it even when the course is finished.
- Course's fluid structure. It allows the teacher to intervene personally, helping the weakest and facilitating the activities of the most talented and enterprising.
- "Guaranteed minimum quality" principle (a.k.a. "effective learning"), which also allows better management of time devoted to the study.
- Humanization of the teaching relationship. In his blog, a student wrote[3]: «The wall that all teachers, even the most available, usually erect as a defense between themselves and students has been broken down.... On the other side of the barricade there is a being with feelings ...»

3 URL: http://tinyurl.com/64xlfc.

3 Student assessment

Since 2000, the computer courses taught by Andreas Formiconi, involved a student population of between 4000 and 5000 students. In the final surveys, the methodology received about 90% positive opinions.

In the first semester of this year, the survey was made by a post, which asked students to express their views on the course, in response to four open questions, whose results (gathered informally in a hodgepodge[4] and distilled[5]) reveal the success of innovation, both on the learning side and the relational side.

In the second semester, the collaboration of the authors of this work and of Emanuela Zibordi (http://www.emanuelazibordi.it/drupal/) led to the creation of a more comprehensive questionnaire, combined with a GoogleDocs spreadsheet, whose data is still incomplete and is still being processed.

About 125 responses have been processed so far, the average score (minimum 1, max 4) for the question on approval of interaction with other students is 3.3 and for the question on approval of the course is 3.5. In regards to the choice of the way in which one takes the exam, it was almost unanimously accepted by students of medicine and was the opposite for those of nursing. This kind of data will be taken and studied deeper when the definitive data is processed. Students who responded to the questionnaire and took the examination in the traditional way (19), gave as reasons primarily the lack of time, even if part of them would go back on this decision, suggesting that in some way, even those who did not take the risk were nevertheless involved in the mood of the blogroom and did not remain indifferent.

4 Some conclusions

This job - still at the planning stage, given the large amount of materials produced - is the first step of a patient effort of enhancing the teaching process in a context in which too often the educational relationship arises just when it should end. The patient patching together of so many communicative and relational streams of the blogroom is aimed at making the experiment accessible and understandable even for those who were not caught by the flow of and at demonstrating the fruitfulness of an interdisciplinary approach that is not reduced to the sum of competences of experts in their field.

The integration of ICT in university education may be truly innovative only if learning activities are throughly redesigned and, therefore, teaching practices are carefully revisited**.** Educational systems cannot be changed simply by pointing out an ideal model to follow, rather we have to start from what they

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4 URL: http://tinyurl.com/5wdrfu.

5 URL: http://tinyurl.com/5w8bv3.

are, from what they do and from how they do it. We believe that a reversal of the theory-practice relationship is needed, starting with teaching/learning tactics and strategies deployed in the reality, so that theory comes after exploration and not *vice-versa*.

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6 All links reported in the notes and bibliography were checked on 28/09/08.