

Chapter 3.11

Web 2.0 and Collaborative Learning in Higher Education

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ABSTRACT

The dissemination of university knowledge has been traditionally based on lectures to students organised in homogenous groups. The advantages of this method are that it can give a unified vision of content, guaranteeing equal access to knowledge for all students. The 21st century university must combine its learning and teaching methods and incorporate different strategies and educative resources, as well as seeking to advance individual learning and promote collaborative work. The relevance of Web 2.0 is clear in this university learning context as it enables collaborative work to be carried out using ICT. In this chapter, we will deal with the different possible uses of social software in university teaching. We will show that the proper use of Web 2.0 tools can favour collaborative learning and promote new ways of teaching and learning.

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NEW LEARNING FORMS AT UNIVERSITY: COLLABORATIVE LEARNING IN THE NETWORK

University teaching has been traditionally focused on large group organisation. At one extreme this has meant grouping together students who learn in the same way at the same time and has brought with it a kind of teaching in which the group is considered homogenous, where the teacher has acquired a role in imparting the content in a unidirectional way and which has leant heavily on memorisation and the posterior verbalisation of what has been committed to memory rather than encouraging other aspects more related to the understanding of meaning.

Despite the fact that it has been shown that large group organisation of this type is not always an efficient system—given that not all students start from the same level or have the same needs—, the arrival in the halls of the ideas developed by authors such as Décroly, Cousinet, Freinet or Freire, defending

the positive aspects which can be achieved by interaction among equals, has been neither easy nor homogenous. In spite of that, however, the present day university, with the adoption of the constructivist learning and teaching model, where the student constructs their own knowledge in an interactive process where the teacher acts as a mediator between student and content, allows us to consider group learning, making it possible for the students themselves to be the mediators in a collaborative way in their learning process.

This kind of organisation of learning has been studied by different authors to show its potential. Jonhson and Jonhson (1991) attribute different basic aspects, amongst those which mention the favouring of positive interdependence, individual responsibility in tasks, the development of interpersonal and small-group exchange skills and the awareness of belonging to a group. Monereo and Durán (2001) indicate that interaction among equals can have a positive effect on aspects such as socialisation, the acquisition of social skills, aggression control, the relativisation of points of view and an increase in the aspiration and academic performance. Onrubia (2003) highlights the fact that students can become tutors to their peers and instigate their development thanks to the contrast between different points of view facing specific tasks that need to be solved working in collaboration, the need to express their point of view quite explicitly and the obligation to coordinate roles, the interventions to help each other and mutual control of the work. Harasim et al. (2000) highlight that collaboration has motivational and intellectual advantages: on a part, to work in collaboration introduces multiple perspectives about a same question; on the other hand, the learning nets allow a global and intercultural collaboration, which can help to fostering mutual respect, confidence and the capacity to work together. Adell and Sales (1999), affirm that the collaborative learning can be a good strategy to help students to being self-sufficient and to contribute to the collective construction of knowledge, since it favors the democracy and the solidarity on the

group and the autonomy in the organization of the student's learning.

Crook (1998) indicates that these studies on collaborative learning underlines the cognitive advantages that stem from the most intimate exchanges that take place when students work together. According to the author, the problem consists of discovering how the discourse is mobilized to the service of the creation of a joint reference, in seeing how there is in use what has been created as platform for new explorations and in seeing how there can perform more or less favorable the material conditions of resolution of problems to the efforts to obtain this mutuality.

In this process of joint construction of knowledge, the eruption of Information Communication and Technology –with computers initially and now Internet– has also been crucial as regards collaborative learning. In a well-known article, Salomon, Perkins and Globerson (1992) draw a distinction between the types of research centred on the educative use of computers. They make a distinction between the analysis of the effects *with* the technology and the analysis of effects *of* the technology. In the first case, the effects with the technology, the emphasis is placed on everything that the student can achieve with the help of the computer; in the second, the effects of the technology, they point out how the student changes their way of thinking thanks to the computer, in other words, their cognitive changes.

As suggested by Kolodner and Guzdial (1996) it is quite clearly necessary to apply this distinction to the analysis of the possibilities of ICT in collaborative learning.

In the case of the effects with the technology, we need to centre our focus on the organisational aspects, on the possibilities of improving collaborative learning situations, and in describing the activities and social grouping which increase the collaboration.

Regarding the effects of the technology, we need to look at the possible changes of the students, at both an individual and group level, after the

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