Chapter 1

Task, Teams and Time: Three Ts to Structure CSCL Processes

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ABSTRACT

This chapter advocates the idea that the structuring techniques generally used to support students in online collaborative activities can be described in terms of three main dimensions, that we call the “three Ts”: Task, Teams and Time. The chapter presents an explorative study, aiming to investigate the differences between the behavior of three groups of students performing activities based on three techniques which differ as to the levels of structuredness of Task, Teams and Time. While the first group was not given instructions on how to structure the work, the second group was given some hints about the need to use some kind of structure and the third group had precise instructions as to how to proceed along the Task, Teams and Time dimensions. The chapter presents the authors’ reflections about the effects of these techniques based on qualitative analysis of students’ reactions to the way the three activities were structured.

INTRODUCTION

According to Kanuka & Anderson (1999) “while not all instructional methods translate well to technology-mediated learning, most do - and some work even better online than in face-to-face learning environments”. Despite this assumption, which was stated more than 10 years ago, there is still a lot of research around what kind of activities and strategies work in online environments and how they can be organized to better foster the collaborative process.

As a matter of fact, the types of learning activities that can be proposed to students in CSCL contexts are rather diversified, and range from open ended, unstructured discussions to highly structured tasks, with pre-defined learning objectives and a common artifact to be collaboratively produced by students as an output of their activity.
The debate about how it is possible to support students’ collaboration has focused, among others, on whether, to what extent and under what circumstances structuring the interactions among students enhances the effectiveness of the collaborative process (Demetriadis, Dimitriadis, & Fisher, 2009; Dillenbourg, 1999). While some studies support the claim that an excess of freedom in the way collaborative tasks are proposed may fail to engage all team members in productive interactions (Hewitt, 2005; Bell, 2004, Liu & Tsai, 2008; all cited in Demetriadis et al., 2009), others maintain that there is a danger also in exceeding in scaffolding students, that is “over-scripting” collaborative learning activities (Dillenbourg, 2002; Dillenbourg, 2004). According to these authors, too much guidance may hinder learners’ creativity, flexibility and ability to self-regulate, therefore jeopardizing the co-construction of knowledge and ultimately causing a loss of effectiveness of the learning process (Dillenbourg & Jermann, 2007).

Very likely, the point is to strike a balance between the two extremes. Thus, it seems that choosing how and to what extent a collaborative activity should be structured is a crucial decision of the instructional designer. This choice should be made on the basis of the features of the target population, the objectives of the learning event, and the requirements of the context where the event is to take place (Palloff & Pratt, 1999; The cognition and Technology Group at Vanderbilt, 1991).

In the following, we will further elaborate on the meaning of the expression “degree of structuredness” to conclude that, in our opinion, the structure of an activity is probably not to be intended as a single dimension on which we can impose a metric, rather it is obtained through the interplay of at least three different dimensions through which the instructional designer may, or may not, provide guidance for the learners. These are what we call the “3Ts” of the structure of collaborative activities: namely “Task”, “Teams” and “Time”, the three dimensions along which support is usually provided. Persico and Pozzi (2010) provide arguments to support this claim and analyse a number of structuring techniques to show how the three Ts may serve their description in quite a complete manner.

In this chapter we focus on two particular structuring techniques, namely the Discussion and the Pyramid, describing them in terms of the three Ts, to introduce a study based on a real life experience where these techniques were used. In the reported experience three groups of students were proposed to carry out a collaborative learning activity, with different support provided along the three dimensions. Finally, the chapter proposes a discussion of the learning dynamics that emerged in the three groups mostly based on qualitative data about learners’ opinions.

THE 3 Ts OF THE ACTIVITY STRUCTURE

Kanuka & Anderson (1999) discuss some frequently used techniques for fostering collaborative learning processes and define them in terms of “prescribed procedures and behaviours to be enacted by students”. Strategies and techniques, which are usually selected by the instructional designer at a macro-design level, allow one to organize and scaffold collaborative activities (that is, structure them) and so to help students in reaching the learning objectives.

More recently, many researchers (Dillenbourg, 2002; Dillenbourg & Hong, 2008; Dillenbourg & Jerman, 2007; Kollar, Fisher, & Hesse, 2006; Weinberger, Ertl, Fisher, & Mandl, 2004; Fisher, Kollar, Mandl, & Haake, 2007) have investigated the concept of CSCL script, which is a specification at macro or micro-design level of how learners should go about the collaborative online activity. While our structuring techniques are very close to what Dillenbourg and Hong (2008) call macro-scripts, the micro-scripts are generally implemented through interaction prompts that help students to formulate their contributions to

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