Chapter 3
Is It Better to be Alone or in Company?
The Impact of the Structural Profile of Interpersonal Skills on Computer-Supported Group-Based Learning

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EXECUTIVE SUMMARY

This chapter presents an empirical study involving first-year students enrolled in the Faculty of Psychology (University of Bologna), who are following a practical formative activity based on Computer-Supported Group-Based Learning. The learning activity is conducted in a blended-learning format—three face-to-face lessons and three online activities; students were randomly associated to two different experimental conditions of participation: Individual Learning (IL) and Group-Based Learning (GBL). Focusing on GBL students, this chapter intends to verify whether different Structural Profiles of Interpersonal Skills (SPIS) might improve the students' comprehension of a scientific text. By analyzing the results of test and re-test, the students with a High Actor-SPIS make a significant improvement, and the groups with a High Density and Low Centralization make significant progress at the ReTest.

DOI: 10.4018/978-1-4666-1936-4.ch003

INTRODUCTION

This chapter presents an empirical study based on a Computer-Supported Group-Based Learning (CSGBL) experience, in which small groups of students worked together in order to reach a common goal during a practical formative activity (An Introduction to Scientific Literature and Language), at the first years of Degree Programme in Psychology. In particular, the study is focused on the use of individual and group structural profiles of interpersonal skills, based on the analysis of the interactions within the groups carried out using Social Network Analysis (SNA). The aim is to study if differences between the profiles of individual students and of groups as a whole, have effects in the process of improving comprehension of a scientific text.

The study extends results of previous research (Mazzoni, Gaffuri, & Gasperi, 2010), in which a comparison was carried out between students assigned to two different experimental learning conditions (individual learning and group learning) on the same Online Learning Environment (Moodle) used for this study. Therefore, in the following paragraphs, we will first describe the context in which the empirical study was carried out, and briefly summarize the primary results of the previous research. This will allow us to better understand the successive step related to the construction of structural profiles of Interpersonal Skills and their possible effects in the improvement of individual abilities in the comprehension of a scientific text.

BACKGROUND

Learning by Interacting with and through Digital Environments

Interacting and learning on the Web are two online activities characterized by continuous transformations determined by the technological evolution of the Web artifacts, from email to the simplest Web sites, Web forums, the more recent social networks, blogs and *wiki* sites; more simply we are in front of the evolution from Web 1.0 to Web 2.0 (Attwell, 2007; Mazzoni e Gaffuri, 2009a). This evolution has introduced new modalities of interaction *with* and *through* such digital artifacts. Cole and Griffin (1987), for example, note that the computer has the potential to profoundly influence both the nature and the organization of educational environments in which it is utilized. The authors describe two specifics frameworks, in which student-computer interaction takes place:

- In the first one the computer acts as a partner who is able to dialogue with the student, substituting the teacher or trainer;