Chapter 15

EDUCATIONAL PERSPECTIVES ON SCRIPTING CSCL

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Abstract: This chapter discusses different educational approaches to collaboration scripts. When carefully designed, scripts can push learners to that kind of situations in which meaningful interaction can take place. However, many conditions need to be met for this to happen in authentic classroom contexts. One of the biggest educational challenges in instructional design of computer-supported collaboration scripts is to better integrate them into wider social planes such as overall classroom activities. Scripts could also be considered as contextual and situated resources in collaborative learning environments. Furthermore, a challenge for future research is to explore how external scripts can be gradually replaced by individual self-regulation. In order to face many of these challenges, longer-term follow-up studies should be conducted in research on collaboration scripts.

1. INTRODUCTION

The use of online learning environments has increased in different educational settings. The problem has been that simply offering online learning environments for student use does not guarantee that they will interact in a way that promotes learning. Also, teachers in the field need pedagogical guidance to use new learning environments. For example, the research done recently in four Scandinavian countries reveals that of the two thirds of the teachers who have received ICT training, only one third of them felt qualified to use ICT in their teaching (E-Learning Nordic, 2006).

At the same time, increasing interest in research on collaborative learning, particularly in computer-supported settings, has provided knowledge that can guide and support student interaction and collaboration. Through scripting, learners would convey an introduction to the activities that they would not otherwise engage in on their own. Scripts have proved to be a
valuable approach to facilitate specific forms of interaction and collaborative activities in online learning environments, which can promote different kinds of learning objectives without compromising the idea of self-guided learning (e.g., Dillenbourg, 2002; Weinberger, Ertl, Fischer, & Mandl, 2005).

The basis of the research on collaboration scripts, as also represented in this book, is the integration of different sciences - cognitive psychology, computer science and educational science - which makes the theoretical background stronger than what would be represented by only one discipline (Fischer, Wecker, Schrader, Gerjets, & Hesse, 2005). The role of educational science is to offer practical insights into exploring the use of scripts in real-life educational settings. In addition, there are pedagogical challenges we will face when implementing scripts into practical educational settings. The articles in this section deal with the design principles and effects of collaboration scripts. Further, they raise several questions related to pedagogical challenges, as well as to methodological questions of studying scripted collaboration.

2. DIFFERENT NOTIONS OF SCRIPTING

Collaboration scripts comprise a number of rules, which describe the way in which learners should interact with each other and collaborate on a task (O'Donnell & Dansereau, 1992). Specifying learners' collaboration processes through scripts is intended to help learners to enter into activities that serve productive interaction and collaborative knowledge construction. Scripts are meant to assign actions in such a way that all learners will carry out in turn the action specified or perform a predefined series of specified actions (Weinberger, 2003). Scripts also provide collaborative learners with a complex set of instructions detailing several goal dimensions, for example, supporting meta-cognitive and elaborative activities or fostering epistemic activities or social processes in particular. Subsequently, scripts aim to enhance the probability of productive interactions.

Recent research on collaboration scripts has made a distinction between macro- and micro-scripts (Dillenbourg & Jermann, this volume; Kobbe, Weinberger, Dillenbourg, Harrer, Hämäläinen, & Fischer, 2006). Micro-scripts lean more toward a psychological, process-oriented perspective, whereas macro-scripts are based on an educational perspective that influences the process more indirectly. According to Dillenbourg and Jermann (this volume), a micro-script scaffolds the interaction process per se by providing sentence starters, question prompts or descriptions. A macro-script, on the other hand, sets up conditions in which favourable activities and productive interaction should occur. Macro-scripting targets to push learners to