Exploring co-regulation in a computer supported collaborative learning environment: A developmental perspective

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Research in the field of Computer-supported collaborative learning (CSCL) has gained considerable attention in recent years because it facilitates participation and social interaction among students, than in the traditional classroom setting, through classroom discussion. Collaborative technologies offer a range of new ways of supporting learning by enabling learners to share and exchange their learning experiences with one another. Computer-supported collaborative learning (CSCL) presents an innovative and powerful way to take advantage of computer technology to provide new forms of learning. However, CSCL environments have often not fulfilled expectations as researchers and educational practitioners have failed to provide the support that groups need to succeed.

It had also been observed that students face a lot of difficulties such as inability to regulate their own learning in a variety of learning contexts, including CSCL environments. The ability to combine computer support and collaborative learning or technology and education in order to successfully enhance learning remains a challenge the CSCL environment is designed to address.

This experimental study reports an investigation of the effect of co-regulated learning prompts on the key stage three (KS3) students’ academic performance, self- and co-regulatory behaviours during computer-supported collaborative learning. Forty year 7 students (11-12 years olds) were randomly assigned to the experimental group (co- and self-regulated learning prompted condition) and the control group (self-regulated learning prompted condition). In order to achieve the study aim, a longitudinal design methodology incorporating three phases was used. The first phase of the study focused on investigating the effectiveness of introducing self- and co-regulated learning (CRL/SRL) prompts into the activity sheets of 8 groups of KS3 students working collaboratively together around the computer using a science simulation and discuss their learning with other members in their group. The second and the third phases included observing the development of the CRL/SRL behaviours of the same 8 groups of students working together on the CSCL environment (Combination of interLoc and science simulation).

Content analysis was carried out on the audio and video recordings, observation notes, and the learners’ activity sheets/ interLoc transcript to investigate the process of students’ self- and co-regulation in the groups over the three phases. Co-regulated strategies for learning questionnaires (CRSLQ), self-regulated learning questionnaires (SRSLQ), and knowledge tests (based on the science content) were administered to the students before, during, and after exposing them to the learning interventions.

This presentation will focus on how multiple methods were used to investigate the effect of CRL/SRL prompts; two self-report questionnaires, knowledge tests and the quantitative content analysis of spoken interaction/ interLoc script. It will be shown that triangulation of outcomes (obtained with different methods) is essential for investigating the effect of the CRL/SRL prompts in particular and to study CSCL in general.

Our findings on the effect of a CSCL environment with CRL/SRL prompts on students’ behaviour and academic performance as compare CSCL environment with SRL only will be discussed. The implications of this study for science educators and CSCL environment designers will also be presented.
References:


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