

A design pattern for collaborative telelearning

Rune Baggetun, InterMedia University of Bergen.
rune.baggetun@intermedia.uib.no

Name:

Virtual assistant*

Category:

CSCL

Abstract:

Collaborative telelearning emphasizes the collaborative interaction in online learning communities in-between students and facilitators. The nature of the distribution puts an heavy load on coordinating the interaction between learners (e.g working in teams), and between learners and facilitators (teachers etc). Mechanisms to support the coordination work on behalf on the students and mediate the interaction are needed to lessen this load. This can be done by designing personal assistant that keep an overview of what happens and report (and support) back to the student. Incorporated in the agent/assistant there also should be wisdom about how knowledge building communities best flourish thereby scaffolding the interaction creating richer interactions and opportunities for learning.

Problem:

Students have difficulties in following and structuring an cohesive joint effort/interaction on learning tasks when working collaboratively in distributed teams. This often lead to little activity, scattered contributions, alienation, and students feeling they are wasting their online time.

Analysis:

Collaborative telelearning emphasizes the collaborative interaction in online learning communities in-between students and facilitators. By following Salomon's (1992) recommendations, collaborative learning environments should be designed to encourage mindful engagement (voluntary expenditure of task related mental effort) among the participants through genuine interdependence. Genuine interdependence is characterized by Salomon as the necessity to share information, a division of labor and the need for joint thinking. In such settings there is a need for monitoring and facilitating this kind of pedagogy (Wasson, 1999, p.5).

These guidelines are great but we often see that students have difficulties in following and structuring joint cohesive interaction on learning tasks when working collaboratively in distributed teams. This often leads, in it's most dramtacillay form, to alienation, and high dropouts rates in e-learning programs. Another major problem is scattered efforts and little persistent cohesive activity along with unwanted group effects like 'ganging upon the task' and the 'sucker effect' (Salomon Globerson, 1989).

The complexity in collaborative telelearning scenarios can roughly be seen from two different points of view. From the instructor's view, collaborative telelearning is hard to monitor and facilitate. It is difficult to notice when a point of genuine activity occurs (e.g. when the students are online working or not) and progression is often not streamlined due to different timetables, local culture, and the individual student's personal preferences.

From a student's perspective, it is also difficult to coordinate and align joint collaborate activities due to much of the similar problems. The problems of coordinating the distributed learning activities often require a "tremendous" effort on the students and the facilitators. The challenge is to move some of this "burden" from humans to ICT based artifacts.

Known solutions:

Make an assistant (or virtual friend) for each student (or for each team of students) that monitor what goes on and gives sound advises for how to collaborate in e-learning. The assistant should keep track of what is going on in the student's virtual environment (assignments, news, messages, collaborative task progress etc.), and in this way support and strengthen the necessary interdependencies between actors in collaborative telelearning environments.

This is a design pattern grown out of InterMedia experiences with how collaborative learning should be supported in distributed settings. In this work we have been using FLE3 (see <http://fle3.uiah.fi>) and developed our own extensions (various assistants and agents) to support both teachers and students.

Research questions:

How should sound advises and wisdom about collaboration be incorporated in the assistant?

How should the assistant appear for the student ?

Who should own the assistant?

Context:

This pattern is particular pertinent to situations where there are non or few face-to-face meetings, or in situations where there a loose relationships between the learners and where the learners are considered novices in e-learning.

Conditions:

Discussion/consequences :

To be discovered.

References

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Salomon, G (1992). What does the design of effective CSCL require and how do we study its effects? *SIGCUE Outlook*, Special Issue on CSCL, 21(3), 62-68.

Wasson, B. (1998). Identifying Coordination Agents for Collaborative Telelearning. In *International Journal of Artificial Intelligence in Education*, 9, pp. 275-299.

Related patterns:

Personalisation

Author (s):

Rune Baggetun

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