Chapter XII

Effective Online Learning – Both a Utilization of Technology and Methods

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ABSTRACT

The authors have used modeling techniques to gain understanding of causes and relationships in online learning environments. The cases that the modeling relates to have their origin in the large Norwegian research project NettLæR, which runs online courses on various topics and levels. The modeling work seems to indicate that good learning models from earlier learning research may still be of relevance, but the conditions to make them work, and the context they operate in, are more limited and more critical than before.

BACKGROUND

It can be argued that industry today does not take full advantage of the possibilities within the traditional formal education system. This is mainly due to a lack
of knowledge of the possibilities offered, and skepticism regarding the formal system not able to deliver according to industry’s needs regarding content, time and place. At the same time new information and communication technologies (ICTs) provide new possibilities for flexible deliveries of courses and communication. In this new context there is even a greater need for a content deliverer like the formal educational system or a company buying courses to make sure that learning takes place as expected.

In Norwegian industry we have seen many examples of employees using much time attending courses with limited learning effects. Most of these courses are either standard education courses or tailor-made courses for a particular company. In many cases there seems to be an underestimated effect of learning in the context where you work—or tailor-making the learning context so that it is regarded to be of clear relevance to the challenges at work for the individual participant. At the same time, industry emphasizes the need for more effective learning, both regarding the need for the knowledge and a need to keep the training costs low (Frick, Hjulstad & Sun, 1996a, 1996b; Frick & Irgens, 1995, 1996; Frick & Riis, 1991; Riis & Frick, 1990; Sun, Hjulstad & Frick, 1999).

After doing some minor experiments with online distance courses over a few years, we set out in 1999 with a larger research project, NettLæR, to investigate relations between an effective learning process and various online learning methods. Acknowledging the vast complexity of the issues involved, we had no intention of researching every possible topic, but rather of identifying some guidelines that seemed to have a major impact on the participants’ learning efforts. As “proof of the pudding,” we decided to establish a set of pilot courses during the research process.

### ABOUT NETTLÆR

NettLæR (an acronym in Norwegian for learning by use of Internet in Rogaland) is a research project in Norway supported by the Norwegian Research Council (NFR) that was established in 1998–99 (Frick, 2000b; Frick & Kaspersen, 2000). It will run for four years with a budget of 2.7M Euro not including the running of courses. It is based on five existing industrial collaboration networks with more than 80 companies as members, and with Rogaland Training and Education Center (in Norwegian Rogaland Kurs og Kompetansesenter, RKK) and Stavanger University College (in Norwegian Høgskolen i Stavanger, HiS) as the main educational vendors (Frick, 2001a).

The main focus for the project is to accumulate knowledge on how to provide and run vocational training as efficient as possible with the ICT tools available. All courses have a reference to the formal education system from 10th grade to PhD level.
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