

**Log Files as an Indicator of On-Line Learning and as a Tool for  
Improving On-Line Teaching**

Gilad Ravid, Edna Yaffe, Edna Tal,

Shoham - The Center for Technologies in Distance Education

The Open University of Israel, Tel-Aviv

One of the major components of on-line learning today is the course web site that functions as a virtual classroom which provides learning materials, teaching methods, and enables students to interact with the materials and the teaching staff.

Since on-line teaching requires significant investment of resources and involves great effort on the part of the administrative and teaching staff, it is extremely important to evaluate its effectiveness. However, determining the effectiveness of a teaching method is a complex issue, especially when evaluating new teaching models.

Evaluation is traditionally performed through means such as tests; students' attitudes (oral or written) toward various aspects of the teaching/learning process (subjective); ethnographic observations (objective in terms of the students but subjective in terms of the observer); and evidence of successful learning from students' products. This paper will suggest the analysis of log files as an objective means for evaluating one facet of students' behavior in an on-line learning environment. Information gained from this method is comprehensive, since it precisely maps all the occurrences of student participation on-line, but, at the same time, it is extremely superficial because it does not reflect actual learning. Nonetheless, we will argue that information thus gained can be helpful to the teaching staff in characterizing and improving on-line teaching. The data is based on 26,000 cases of student access into about 300 on-line course sites over a single semester at the Open University of Israel. Analysis of the data provides a picture of how many students participated in the courses, the extent to which they were active in the course and at what stage of the course, the relationship between the teaching style of the course coordinator and the amount of interaction, and the role of lurkers in group activities.