

Course-Barometer: Compensating for the loss of informal feedback in Distance Education

Lars Svensson

Laboratorium for Interaction Technology, University of Trollhättan Uddevalla, Sweden
lars.svensson@udd.htu.se

Robert Andersson

Dept. For Economy and Computer Science, University of Trollhättan Uddevalla, Sweden
Rob.anders@usa.net

Magnus Gadd

Dept. For Economy and Computer Science, University of Trollhättan Uddevalla, Sweden
gadd_magnus@hotmail.com

Anders Johnsson

Dept. For Economy and Computer Science, University of Trollhättan Uddevalla, Sweden
sv96122@student.udd.htu.se

Introduction

The Internet and other interaction technologies can be argued to reduce the differences between classroom-based and distributed education. This paper focuses on evaluation, an area where these differences are still evident. In campus-based education we can use formal structures and routines to evaluate certain educational aspects, such as teaching methods, learning technology or course concept, or use a holistic approach to the entire learning context, and we can do so using quantitative and or qualitative methods (Oliver & Conole, 1998). In addition to this there are also more subtle and informal sources of evaluative feedback that constantly reaches the teacher. The classroom is literally filled with more or less non-verbal signals that can be interpreted in terms of feedback. The students can express their degree of interest and concentration through the way they sit, the expression of their face, where the look and through other body-lingual expressions. An important aspect of the teacher's professionalism is the ability to adapt and adjust according to these signals in order to meet the needs of an individual or a group of students. The formal systems and instruments for evaluation can easily be transformed and perhaps even enhanced by the use of IT, but the equally important informal feedback is to a great extent lost in the virtual classroom. In asynchronous text communication the loss of direct non-verbal communication is total, however several studies point to a frequent use of emoticons like for instance smileys (i.e. ":-)") and comments surrounded by asterisks (i.e. *smile*) that to some extent compensate for this loss (Galegher et al 1998), (Svensson 1998a 1998b). Whittaker et al (1994) raises the question how to design IT-support for informal workplace (verbal) communication. They characterize it to be brief, unplanned and frequent and go on arguing that it is important for community building and coordination of work. In conclusion they stress the importance of asynchronous technologies in order to coordinate remote interactants.

The *Course-Barometer* is a web-application that is presently tested in a distance education project in Sweden. It tries to address the loss of informal feedback (verbal and non-verbal) discussed above. The application, written in perl, has a simple interface [www 1], where it is possible for the user to signal his/hers present mood or attitude and also to view cumulative statistics of the mood-indications made during the course. Mood-indication is done with a click on the mouse on either a green rectangle, labeled "positive" or on a red rectangle labeled "negative", the user also has a possibility to add an optional comment with his mood-indication. Finally the interaction is completed through a click on the submit-button. A submission without explicit green or red indication is interpreted as a neutral mood. When clicking the "Show Statistics"-button, the complete list of comments is generated on the screen. The timed entries are presented in descending chronological order. The text is color-coded in green or red corresponding to the mood-indication that followed with it (black text is used to indicate neutral mood). To the right of the list there is a graph showing the total number of positive, neutral and negative indications. Finally the application can be configured to generate periodical email to the teachers, with total mood-statistics and list with submitted comments.

The subjects of the study are 60 students engaged in a 10-week course in Mathematics and Statistics. This is the first course in a three-year program in Systems Analysis. The barometer was introduced to the the course website six weeks after the course

started and was used by the students till the end of the course, three weeks later. The study includes a survey aiming at monitoring the students' attitudes towards their possibility to exercise influence over their learning context, before and after the implementation of the barometer. The survey also includes questions directed towards an evaluation of the interface of the application. This is complimented with interviews with the three participating teachers (1st author of this paper was one of the teachers) Finally, each submitted comment will be analyzed with respect to structural, language and purpose indicators. (Orlikowski and Yates 1994)

The entries coded as having a primary purpose of giving explicit feedback to the teachers was then analyzed with respect to the nature of feedback, using the following nominal scale inspired by Draper (1997 (a.) Agree/Disagree with other author, (b.) Report on Success or Failure, (c.) Explanation (Opinion with supporting arguments), (d.) Behaviour recipe (suggestion for change).

Preliminary results

The four weeks of use resulted in a total of 213 submissions, of which 63 included a comment. The number of comments per day varied from 4 to 7 during school days with no obvious ascending or descending trend over the time-period. 57 % of the comments were coded in red, 10% neutral and 33% positive. Most comments are short and have an informal, structure and language. The use of smileys, capital letters and (repeated) exclamations and question marks is very common, but opening salutations and signoffs does not exist. Using the frameworks for categorizing the entries with respect to primary purpose reveals that 63 % had a pure purpose of expressing the author's "mood".

Examples: "Now I start to get the hang of this, and tomorrow it's time for a new module... *sigh*", "Can it get any worse?", "I hope I can use this later, or else I will puke", "I'm actually on top of things, GREAT!!!!!"

27 % of the comments contained an evaluative content of some sort (sometimes added to a mood-indication), these gave feedback on the learning technology, teachers performance and course content. The nature of feedback in this entries were classified as reports of success (6 entries), reports of failure (8) agreeing with a previous entry (1) and suggestions for change (3). It is interesting to notice that the color code was not always coherent with the text of the message. Several entries reported on great difficulties to keep up with the pace of the course, but was still coded in green mood, and one entry gave positive feedback on teacher performance coded in red. Further studies will show if designs like the barometer can to some extent be used as compensation to the loss of informal communication in educational settings. If so, there is a need for the users to lift these signals from the more or less subconscious level of body language to a level of conscious action, hence the click of the mouse. In this process from subconscious to conscious there is of course a great risk of loosing the validity and reliability of the intended evaluation.

References

- Draper, S W. (1997) *Feedback*. Available at URL <http://www.psy.gla.ac.uk/~steve>
- Galagher J, Sproull L & Kiesler S (1998) *Legitimacy, Authority, and Community in Electronic Support Groups*, Written Communication, Vol 15 No 4 Oct 98 p493-530, Sage Publications
- Laurillard, D (1993) *Rethinking University Teaching: a framework for the effective use of educational technology*, London
- Orlikowski, Wanda and Joanne Yates. (1994). "Genre Repertoire: The Structuring of Communicative Practices in Organizations," *Administrative Science Quarterly* 39: 541-574.
- Oliver, M (1997) *A framework for evaluating the use of educational technology*. - Available at <http://www.unl.ac.uk/latid/elt/>
- Svensson L (1998a) *Discursive Evaluation: Experiences from a distance education project: I* Innovation in the evaluation of learning technologies (edited by M Oliver), University of North London
- Svensson, L (1998b) *Query, Feedback and Smalltalk: Genre Repertoire in a distance Education Project* - Proceedings of IRIS 21
- Whittaker, S Frohlich, D & Daly-Jones, O (1994) *Informal Workplace Communication: What is it like and how might we support it?*, in *Human Factors in Computing Systems*. CHI-94-4/94 Boston, Massachusetts USA