

Engaging Learners in the Identification of Key Ideas in Complex Online Discussions

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Abstract: In online courses, students can quickly generate discussion threads that contain hundreds of notes. Only a handful of these notes may contain significant new ideas. To help students better identify the key ideas in online discourse, we are experimenting with a new software support: a “Recommend” button. This paper describes the different ways that students made use of “Recommend” and the degree to which the facility changed reading patterns in the course.

Objectives

One of the problems in distance education courses is the challenge of identifying important ideas in online discussions. For every note that contains the germ of a useful idea, there may be dozens of notes of limited value. Consequently, conference participants are constantly faced with the challenge of separating the wheat from the chaff; valuable new contributions can be easily lost or overlooked in the complex web of online messages. Sorting through dozens of notes can be a frustrating and time-consuming process. Moreover, once a promising idea is uncovered, it can be difficult to convey its importance to other members of the community.

To support learners in their efforts to identify useful ideas, we have recently experimented with the design of a new software feature called the “Recommend” button. The Recommend button is an on-screen facility associated with every message in a computer conference. When students feel that a particular message contains an idea of value, they can click on “Recommend” to recommend it to their classmates. This causes a small icon to be displayed beside the message’s title, signifying that it is worthy of further attention. As additional people recommend a particular message, the icon becomes brighter. This provides learners with a visual means of indicating the value of these messages.

To explore the utility of the “Recommend” facility, our research focused on the following questions:

1. What is the students’ experience of using this new facility? What do they like, and not like, about the process of recommending notes?
2. How do graduate distance education students make use of the Recommend facility?
3. Is there evidence that Recommended notes receive more attention from students (i.e., they are read and re-read more often) than non-Recommended notes?

Theoretical Framework

The research is theoretically grounded in the knowledge building literature (Scardamalia & Bereiter, 2003, Hewitt, 2004, Scardamalia & Bereiter, 1994). A knowledge building community is a group of people who are dedicated to sharing and advancing their collective knowledge. The focus is on the community’s ideas and the testing and improvement of those ideas (Bereiter & Scardamalia, 2003, Scardamalia & Bereiter, 2003) with the goal of making intellectual progress on challenging problems of understanding. The community’s objective is not to produce a final product – e.g., an essay or a report – but rather to work together to create new knowledge. From an educational point of view, engagement in knowledge building activity necessarily drives personal growth in the form of deeper understandings and engagement in higher order thinking processes. In online courses, students ideally work together collaboratively as a knowledge building community to extend their collective knowledge. One of the key challenges, however, is to identify the ideas that are most promising. The Recommend facility was developed to help the community address that challenge.

Methods

The research was conducted in “Pepper”, a computer conferencing program developed at the Ontario Institute for Studies in Education at the University of Toronto. The “Like” button in social networking programs (e.g., Facebook) served as a model for the Recommend facility. Pepper was modified so that people could click on a small “Recommend” link on the bottom, right-hand corner of a note to indicate that they wished to recommend the note to their peers. The number of recommendations was displayed to the immediate left of the button. Clicking on the button caused a “thumbs-up” icon to be displayed adjacent to the note’s title. As more people recommended a particular note, the thumbs-up icon turned an increasingly bright shade of blue, thus making it easier to identify notes that were widely recommended.

The Recommend facility was tested over a period of 4-5 weeks in two online graduate courses during the January 2010 - April 2010 academic term. Both instructors were highly experienced with computer-

mediated conferencing and the teaching of distance education courses. The two courses followed a similar 12-week format. Each week, students were assigned a set of readings, which they discussed in their online conferences. New conferences were created for each week's readings. The marking schemes in both courses were based upon a combination of written assignments, the moderation of a weekly conference, and participation in online discussions. Course #1 contained 20 students and Course #2 contained 15 students. Both courses explored topics related to educational technology. Data were collected from two sources: (a) Student activity was monitored using log files that maintained time-stamped records of each student's actions. These data were examined to determine whether students were spending more time examining recommended notes than other notes. (b) Student focus groups served as a second source of data. The focus group meetings were digitally videotaped and transcribed.

Summary of Results

Space does not permit the detailed presentation of all the results from this study. However, here are some of the principal findings:

- To determine whether or not Recommended notes attract attention, we examined the log data to determine how often students opened Recommended and non-Recommended notes. In both courses, students examined Recommended notes significantly more frequently ($p < 0.01$).
- In the focus group interviews, students reported that they felt the Recommend button was a useful addition to their course. It was notable, however, that their appreciation of the feature appeared to be grounded in social rather than cognitive factors. Students liked having their notes recommended by their peers. They felt it validated their ideas and made them feel closer to their classmates. Thus, the feature appeared to promote a sense of communal cohesion, in addition to helping people more easily identify valuable ideas.
- In a secondary analysis we searched for patterns in the number of Recommendations given and received by students in the two courses. In Course #1, there was no obvious relationship between giving and receiving Recommendations ($r=0.12$). However, in Course #2, a positive correlation was found ($r=0.60$), suggesting that people who give a lot of recommendations tend to receive a lot of recommendations. This may indicate that reciprocity plays a role in some of the recommending.
- A few students reported they were reluctant to use this facility, since a percentage of their final course grade was based on class participation. They were concerned that their participation mark would be determined, in part, through a qualitative and quantitative comparison of students' notes. Consequently, it was not to their advantage to use "Recommend" to promote other people's notes.

Conclusions

In computer conferencing environments, all "notes" are visually similar to one another. In practice, this can make it difficult to single out the notes that contain ideas of value to the class. The goal of the current analysis has been to develop new software supports that allow community members to more easily draw community attention to promising ideas so that these ideas can grow through further critique, analysis and refinement. The Recommend button appears to be successful in terms of focusing greater learner attention on particular notes. However, student concerns about grades may have prevented the tool from realizing its full potential.

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