Use of a "Like" Button in a Collaborative Online Learning Environment

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Abstract: Information overload is a commonly reported problem in distance education literature. To address this problem, a button was created in an online learning environment that allows learners to "like" a note to bring more attention to it. Graduate students in fully online courses were surveyed to capture why and how the Like button is used and if it supports learning. Analysis of the results indicate three types of situations where the button is used: 1) when someone has similar thoughts or feelings students identify with; 2) when someone offers a new or interesting perspective, or 3) when someone provides a deep analysis of the subject matter. These findings support the clarification of use and re-design of the Like facility.

Objectives

The vast majority of current online courses employ asynchronous threaded discussions. Since threaded structures link related notes and allow learners to follow multiple simultaneously-occurring discussions (Hewitt, 2005), they provide opportunities for individuals to discuss with their peers while reflecting on their insights on the subject matter by sharing knowledge and making meaning (Oztok, 2012). Considering that learning practices heavily rely on knowledge sharing and meaning making (Stahl & Hesse, 2009), threads become critical for learning practices to occur in online learning environments. However, threaded discourse is problematic because of the limited facilities associated with the production of messages.

The fundamental structure of a threaded discussion is the hierarchical arrangement of notes – as time goes on, more and more "branches" are added and the discourse grows in many directions simultaneously (Hewitt, 2005). From the learner's perspective in Pepper (a collaborative online learning environment), there is nothing on the computer screen to visually distinguish one note from another, making it difficult to identify those messages, or sets of messages, that are deserving of the community's ongoing attention (Fig. 1). Some of the branches may contain promising new ideas. Other branches may contain little of value. The title of each note in a thread is given equal screen real estate, regardless of its intellectual contribution to discourse. This inability to separate the promising ideas in a threaded discussion leads to a sense of overload as the threads become larger and larger.
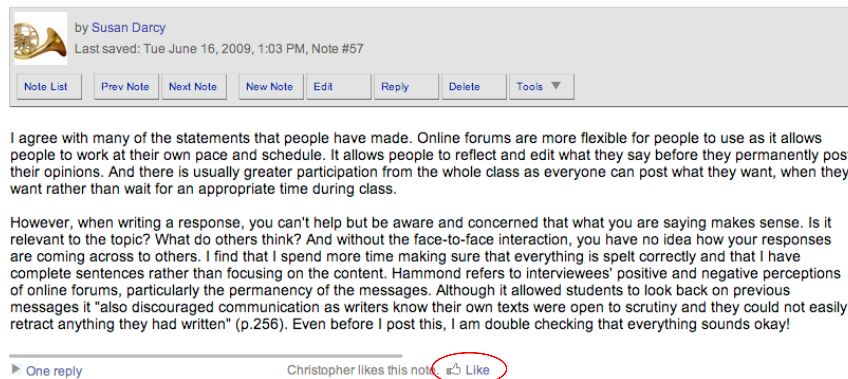
☆ Communication with Online Forums by Doris Calvin #35, Tue June 16, 2009, 12:29 PM
　☆ My response by Rhonda Naimes #36, Tue June 16, 2009, 12:31 PM
　　☆ Own pace by Doris Calvin #37, Tue June 16, 2009, 12:31 PM
　　　☆ Length by Martin Bradley #38, Tue June 16, 2009, 12:32 PM
　　　　☆ Nice to meet you by Carl Pride #39, Tue June 16, 2009, 12:33 PM
　　　　　☆ Completely Agree by Nania Gonzales #40, Tue June 16, 2009, 12:33 PM 👍
　　　　　☆ 50/50 by Safia Glennis #41, Tue June 16, 2009, 12:34 PM
　　　　　☆ Problems with online courses by Nero Radakovic #42, Tue June 16, 2009, 12:36 PM
　　　　　　☆ Discussion threads by Safia Glennis #43, Tue June 16, 2009, 12:36 PM
　　　　　　　☆ Re. Discussion threads by Nero Radakovic #44, Tue June 16, 2009, 12:37 PM
　　　　　　　　☆ Re. Discussion threads by Safia Glennis #45, Tue June 16, 2009, 12:37 PM
　　　　　　　　　☆ Design on how to use a discussion thread by Martin Bradley #46, Tue June 16, 2009, 12:38 PM
　　　　　　　　　　☆ Hi Martin by Jim Hewitt #66, Wed June 17, 2009, 10:18 AM
　　　☆ Breadth by Donna Martin #177, Tue August 17, 2010, 3:16 PM
　　☆ Students Benefit w/ Online Communication by Nania Gonzales #47, Tue June 16, 2009, 12:40 PM
　　　☆ Too young by Rhonda Naimes #48, Tue June 16, 2009, 12:40 PM
　　　　☆ Age Specific and Modification for Specific Age by Martin Bradley #52, Tue June 16, 2009, 12:57 PM
　☆ Response by Ashley Freiths #53, Tue June 16, 2009, 12:59 PM
　☆ Rhonda's Comments by Rhonda Naimes #54, Tue June 16, 2009, 1:00 PM
　　☆ Spontaneity by Jim Hewitt #55, Tue June 16, 2009, 1:01 PM
　　　☆ Valuable feedback by Marj Crenshaw #56, Tue June 16, 2009, 1:02 PM
☆ Online still makes me nervous by Susan Darcy #57, Tue June 16, 2009, 1:03 PM 👍
　☆ Awareness of online forum by Nania Gonzales #58, Tue June 16, 2009, 1:03 PM
　　☆ Like driving a car by Doris Calvin #59, Tue June 16, 2009, 1:04 PM
　　　☆ CMC vs. F2F by Nania Gonzales #60, Tue June 16, 2009, 1:05 PM
　　　　☆ F2F vs. the Phone by Martin Bradley #61, Tue June 16, 2009, 1:06 PM

Figure 1. Example of a threaded discussion in Pepper.

In an effort to overcome this problem, we are currently experimenting with online tools that allow learners to

identify promising messages. We have introduced a "Like" button that learners can click to indicate their personal approval of a message's content (Fig. 2). The word "Like" is a rather generic term, and consequently we wanted to better understand how learners view the term and how they used the Like button in their online courses.

Online still makes me nervous ☆

by Susan Darcy
Last saved: Tue June 16, 2009, 1:03 PM, Note #57

| Note List | Prev Note | Next Note | New Note | Edit | Reply | Delete | Tools ▼ |

I agree with many of the statements that people have made. Online forums are more flexible for people to use as it allows people to work at their own pace and schedule. It allows people to reflect and edit what they say before they permanently post their opinions. And there is usually greater participation from the whole class as everyone can post what they want, when they want rather than wait for an appropriate time during class.

However, when writing a response, you can't help but be aware and concerned that what you are saying makes sense. Is it relevant to the topic? What do others think? And without the face-to-face interaction, you have no idea how your responses are coming across to others. I find that I spend more time making sure that everything is spelt correctly and that I have complete sentences rather than focusing on the content. Hammond refers to interviewees' positive and negative perceptions of online forums, particularly the permanency of the messages. Although it allowed students to look back on previous messages it "also discouraged communication as writers know their own texts were open to scrutiny and they could not easily retract anything they had written" (p.256). Even before I post this, I am double checking that everything sounds okay!

▶ One reply   Christopher likes this note   👍 Like

Figure 2. The "Like" button [*circled for emphasis*] is accessible when a note is being viewed.

The current research is focused on students' understanding and usage of the button in its current form, "Like", to inform the redesign of the facility. The following questions motivated this study:

1. Why and how are students using the "Like" button?
2. Does the button support their learning?

The Environment

Pepper is a collaborative online learning environment that has been designed to foster higher-order thinking skills. One of the assumptions of the computer mediated communication (CMC) is that learners are working together as a community of inquiry (Garrison et al., 2000) whereby the dynamic interaction of social presence, cognitive presence, and teaching presence impacts the learning that is taking place within the environment. The interaction of these elements is represented in the diagram below (Fig. 3). Knowledge building is the focus and is defined as the advancement of knowledge by a community of learners through the process of testing and improving (Bereiter & Scardamalia, 2003; Scardamalia & Bereiter, 2003). This requires that the facilities of the online environment support the process and that courses are designed to enhance the process of advancing knowledge.
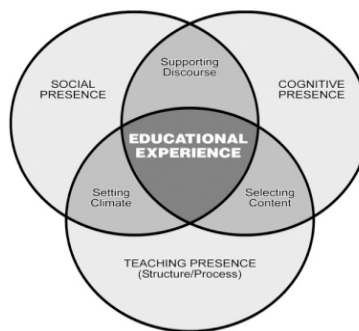
Figure 3. Community of Inquiry Model developed by Garrison et al. (2000)

Community of Inquiry Framework

The model assumes that learning is taking place in an asynchronous, text-based environment. The following describes the three elements of the CoI framework that support educational experiences as they relate to the process of knowledge building.

Cognitive Presence

Cognitive presence is the ability of members of a learning community to construct meaning through sustained discourse (Garrison et al., 2001). Learners construct meaning by moving through the following stages: the triggering event, exploration, integration and resolution of ideas. Research suggests that the design and the facilitation of an online course helps to support learners through these stages of construction (Duphorne & Gunawardena, 2005; Moore & Marra, 2005; Oriogun, et al. 2005; Schrire, 2004). In bringing attention to specific notes in the threaded discussion, the learners are more aware of where they should focus their efforts in threaded discussions.

Social Presence

The CoI model conceptualizes social presence as the feeling that members in the group have a shared social identity. Garrison (2009) defines social presence as "participants identifying with the community, communicating purposefully in a trusting environment, and developing interpersonal relationships" (in Garrison et al., 2010, p. 7). Provided that learners can like any note produced, it is easy to understand how these feelings can be generated.

Teaching Presence

Teaching presence has a large role in the CoI model as it can be considered a determinant of students' perceived learning, satisfaction, and sense of community (Garrison & Arbaugh, 2007, p. 153). The three components of teaching presence – course design and organization; facilitation of discourse; and direct instruction – are necessary for the success of the CoI framework. To sustain an online learning community, the interactions taking place "need to have clearly defined parameters and be focused in a specific direction, hence the need for teaching presence" (Garrison & Arbaugh, 2007, p. 163). The possibility exists where instructors can actively participate in the learner's knowledge building community; however, in graduate-level courses, learners are expected to advance knowledge with peers.

The elements of the CoI framework act in concert to foster a community that is seeking to advance their collective understanding and knowledge. Learners are the dominant active participants but instructors have the ability to engage in this process as a directive measure to ensure that course goals are achieved. The cognitive, social and teaching presence elements should be taken into consideration in order for the Like button to be functioning as a way to support this process. In its current state, the act of "liking" supports the social element of the online community, though the variety of ways it is used has not yet been investigated. To offer suggestions for new designs, it is necessary to understand how students are using the Like button.

Data Source

To investigate graduate students' understanding and use of the Like button, we administered an online survey and sought voluntary participation from students enrolled in three graduate level educational psychology courses. These courses took place fully online in winter (January – April) 2012 and all used the same in-house, collaborative online learning environment, Pepper. We received 31 responses from the 80 total students.

We focus our analysis on four questions from the questionnaire. First, we asked students whether they use the Like button and, if so, to list reasons for its use. Then, in order to focus on our hypotheses related to social and cognitive presence, we explicitly asked students whether and how the Like button supports learning, and how it affected their social experiences during the course.

Findings

Our findings suggest that the Like button may have educational value in fostering knowledge cultivation although there are inconsistencies in the reasons for students using the button. Our data analysis reveals that students

use of the Like button can be categorized into three situations: 1) when someone has similar thoughts or feelings students identify with; 2) when someone offers a new or interesting perspective, or 3) when someone provides a deep analysis of the subject matter. When the sub-categories of cognitive presence are considered, our results suggest that the Like button may provide opportunities for triggering and integration practices since people tend to like notes that they find familiar or notes that they find creative. For instance one participant responded that she used the button "when someone writes ideas that are comprehensive and creative. As well as when someone leaves you with thoughts to reflect upon" (respondent #4). According to this participant, a note worthy of a like is comprehensive and provocative. Thus, the Like button can provide opportunities for developing or promoting cognitive presence.

Further analysis of whether the Like button helps learning practices shows that the button may have an impact on learning in two ways. First, people engage more with notes that have received one or more likes; thus, they serve as a filter for the community to focus on problems and depth of understanding. Second, it helps with creating collective knowledge. According to Scardamalia and Bereiter (2003), filtering and collective knowledge are foundational characteristics of knowledge building discourse. In particular, if one element of knowledge building is to "focus on problems and depth of understanding" (p.274), then the Like button may "help [students] to keep track of those notes that … are important and beneficial for learning" (respondent #19), since "it is hard to read each and every post, and the Like button gives the reader a chance to browse through the most viewed and liked comments" (respondent #12). Other evidence can be found in respondent #17, who articulates "there are a lot of post[s], and if you need to be selective, the ones that are 'liked' are a good start".

In terms of creating collective knowledge, our data suggests that the Like button can provide a means for individuals to regulate themselves and their learning processes. For instance, one participant posits that:

> For people who are not sure if they are 'on the right track' regarding their own comments, they can check other people's notes who get a lot of 'like' comments and see why are these comments getting all the attention from other participants, what is good about them -in other words, see how a good comment should look like. This would help them to develop their own contributions based on other people's work and try to achieve the same level, or quality (respondent #22).

According to this participant, the Like button advances the collective knowledge of a community since people perceive that a liked message is of higher quality, with strong synthesis of ideas and that others should meet such standards. Indeed, other participants offered similar explanations and suggested that the Like button can leverage discussions up to a higher cognitive level as "it encourages people to share their thoughts, … meaning that more knowledge is shared" (respondent #31).

Our final analysis is related to the social aspect of the Like button. Participants overwhelmingly responded that receiving a like for their notes made them feel happy since it indicates that their peers value their perspectives. The Like button can be associated with generating a sense of belonging to a community. Particularly, receiving a like makes them "feel more connected" (respondent #17) since "it makes [them] feel included and want to post some more" (respondent #14). Some participants indicated that they might like a note if the person who posted the note already liked their notes. Another participant surprisingly noted that using the Like button is "like paying in forward" (#18).

Conclusion

In an effort to better highlight the promising ideas in student-generated online discussions, we equipped distance education students with a "Like" button and then surveyed them to see how this new facility was used. The goal of this survey was to understand the ways that the Like button is used when course instructors do not prescribe its function. The results indicate that there are three situations where students use the button: 1) when someone has similar thoughts or feelings students identify with; 2) when someone offers a new or interesting perspective, or 3) when someone provides a deep analysis of the subject matter. In each of these situations, evidence does not indicate how much the button supports learning in its current form. Respondent #31 captures this: "I guess the very idea of liking a post means I may have learned something from it". This lack of continuity indicates that the Like button facility should be further developed in order to specify its role in the collaborative online learning environment.

These recommendations for future iterations of the Like button facility will be explored in order to bring clarity to the use of the button in the knowledge building process: 1) renaming the button; 2) encouraging course instructors to define the functionality of the button; and, 3) adding additional buttons as scaffolds. An analysis of these recommendations, once designed and implemented, is necessary to understand how the facility can be best used to support student learning.

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