

## **Feedback plug-in application for Blackboard: The much needed tool for revolutionizing the assessment of students' online discussion participation**

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### **Abstract:**

A new focus in online education is recognition of the importance of self-regulation for successful online learning. As such, more efforts are being directed toward assessment initiatives that aim to make students more cognizant of their learning efforts and performance in the online learning environment. Building on prior research, in this project, we developed a feedback plug-in application that will promote student self-regulation in online discussions by revolutionizing the way instructors assess their students' discussion participation.

### **Introduction**

There is an established literature base in online education viewing self-regulation as a precondition for student success in online learning environments (Artino & Stephens 2009; Cho & Shen, 2013; Paraskeva, Mysirlaki, & Choustoulakis, 2009; Shea & Bidjerano, 2010; Shen, Lee, & Tsai, 2007; Sun & Rueda, 2012). This literature posits that helping students plan, monitor, and reflect on their learning and performance is vital in promoting profound learning opportunities and achievements in online courses.

As online learning environments are characterized by social constructivist approaches that view interaction as the primary means of learning, discussions form a crucial feature of online classes (Swan, 2010). Researchers have repeatedly shown that learner interaction in online discussions positively influence individual learning outcomes (Agee & Uzuner Smith, 2012, Garrison & Cleveland-Innes, 2005; Paus, Werner, Jucks, 2012; Wu & Hiltz, 2004, Zhu, 2006). If discussions are important to the success of online learning, it can be expected that student self-regulation plays an especially important role

in those discussions. Online students who self-regulate their efforts in discussions will most likely produce quality conversations that are associated with meaningful learning, whereas students who do not plan, monitor, and reflect on their discussion participation may not meet or achieve the learning goals they are expected.

According to self-regulation literature, students' ability to plan, monitor, and reflect on their performance to improve their academic achievement is controlled and guided by feedback (Shapiro & Schwartz, 2000). In this formulation of self-regulation, feedback that is indicating present behavior's deviation from desired norms or expectations allows students to decide whether to seek self-corrective actions to decrease that deviation. In the same way, feedback that is indicating success in performance provides information for students to decide whether to maintain that performance or to raise goals to achieve maximum condition. In both examples, feedback serves an important role in enhancing students' mindful engagement with their tasks and goals, which results in self-regulation.

The forces of feedback that trigger self-regulatory processes in students can be social (e.g., such as praise or guidance from a teacher, peer, or a parent), environmental (e.g., task, micro-environment, or computer outcomes), or personal (e.g., awareness of covert, physiological, or behavioral outcomes)" (Zimmerman & Cleary, 2009, p. 247). We concur with Johnson and Johnson (1993, p. 136) that while the optimal situation may be to receive feedback concurrently from all three sources, "the most powerful source of feedback is from other people" – the social, especially the guidance from a teacher.

While we view teacher feedback as a powerful means of facilitating student self-regulation in online discussions, we understand the challenge that instructors might face in trying to provide individualized feedback to students in large online classes. As Tan, Ullrich, Scheuer, Melis and Shen (2011) pointed out, some online classes have several hundred students. In such large classes, providing specific feedback that can bring about mindfulness in students and influence their subsequent self-regulated engagement with discussions can be a challenge for instructors. One possible solution to this challenge is to provide instructors with a feedback pool from which they can pick and choose appropriate comments applicable to various student behaviors observed in online discussions.

### **Project Description**

In Spring 2013, we obtained funds from Academic Partnerships and embarked on a qualitative study which allowed us to develop a feedback pool that includes a range of predetermined comments that can be applicable to students' participatory behaviors observed in online discussions. We developed this feedback pool after conducting a qualitative coding of approximately 300 pages of discussion transcripts generated in six fully online, graduate-level education courses. Our analysis culminated in the development of approximately 50 comments that instructors can choose from while evaluating their students' online discussion participation. A full report of this study can be found at <http://facultycommons.org/spotlight-lamar-university-ap-faculty-research-grant-recipients/>

In 2014, we sought additional funds to refine this feedback pool and to develop it pool into a web-based feedback plug-in application that can be installed in the Blackboard Learning Management System as an add-on tool.

Once the grant was approved, we hired two undergraduate students from Lamar University's Computer Science program. Under the supervision of a faculty member from the same department, these two students created a prototype for the feedback plug-in application. The prototype is web-based and it can be installed in the Blackboard Learning Management System (or any learning management system for that matter) as an add-on tool.

### **How does the feedback plug-in application work?**

In order to understand how the plug-in application that we developed works, it is important to understand the current system Blackboard uses for grading and evaluation of students' online discussion participation. We believe that Blackboard's current system is in need of a productive change and that the feedback plug-in tool we developed can be the solution.

The current system Blackboard uses for grading and evaluation of students' online discussion participation is as follows: Once the instructor enables grading for a particular discussion forum, a 'Grade discussion forum area' is automatically created and students' individual contributions are collected in this area. Once the instructor accesses this area, s/he can review all messages posted by a student. The instructor has two options during this review: One is to write feedback and comments in the area that is visible to the students; and two is to use a rubric to assign a participation grade.

With the creation of the feedback application, we attempted to bring into Blackboard an alternative system that will allow instructors to evaluate their students' online discussion participation in more meaningful and efficient ways than what is currently available. The system we developed will work as follows: When the feedback application is installed within Blackboard, it will convert students' discussion postings into a format that will allow online grading of those postings with the use of a dropdown annotation tool menu. The tool menu will offer instructors approximately 50 (or more) pre-designed feedback options that they can choose from under four categories: *cognitive processes*, *engagement*, *written expression*, *use of source material* and *format*. (Note that we created these categories based on our prior research). When an instructor views individual students' postings displayed inside the Blackboard web browser, s/he can highlight specific words, sentences, or paragraphs within students' posts and then click on the dropdown menu, choose the appropriate feedback and attach it in the margins of the highlighted area. The comments available in the dropdown menu can be modified by instructors. That is, if they wish, the instructors can personalize their feedback for particular students.

### **Significance of the Project**

We believe the feedback plug-in application that we developed will revolutionize the way online instructors assess their students' discussion participation especially in large online classes. Choosing from a multitude of readily available comments, rather than creating their own, can positively influence teachers' feedback practices, including the content of their feedback as well as its timing, efficiency and management. More importantly, receiving specific feedback/pointers, not just a grade, on their discussion participation can help students become mindful of their talk as well as their participatory behaviors in online discussions. We argue based on Shapiro and Schwartz's (2000) work that an increase in such mindfulness can lead to conscious, intentional self-regulation which allows students to monitor their discussion performance and strategically plan for improvements. We further argue that fostering such self-regulation at the individual level can promote the kinds of self-regulation that is needed to enhance learning opportunities for all students in online discussions.

Information provided in this grant application is proprietary in nature.

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