

# A Qualitative Exploration of Self- and Socially Shared Regulation in Online Collaborative Learning

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**Abstract:** This qualitative study explored how groups with high or low self-regulation regulated their collaborative behaviors. We used purposeful sampling to select two groups of students in an online course with the highest and lowest mean self-regulation scores, based on survey data. We inductively analyzed online discussion posts and identified three themes that described the groups' processes for externalizing and internalizing understanding: level of engagement with content, approach to seeking and providing help, and openness to disagreement and problem-solving. The group with the highest mean self-regulation scores elaborated upon course concepts, helped one another understand and apply ideas, and integrated viewpoints to carry out course activities. The group with the lowest scores wrote about surface-level features, exchanged help in a brief and depersonalized manner, and moved quickly to consensus without evaluating alternative perspectives. These patterns illustrated marked differences in the development of socially shared regulation.

**Keywords:** self-regulation; socially shared regulation; online learning; collaborative learning

## Introduction

The extant research on self-regulated learning often emphasizes examining relationships between self-regulation and students' engagement, achievement, and affective characteristics. For group learning contexts, scholars (e.g., Hadwin & Oshige, 2011) proposed the concept of socially shared regulation, "processes by which multiple others regulate their collective activity" (p. 258). Researchers have studied this concept to explain how groups of individuals, as multiple self-regulating agents, socially regulate each other's learning in social learning contexts (e.g., Hadwin, Oshige, Gress, & Winne, 2010; Järvenoja & Järvelä, 2009). Some studies have shown evidence that socially shared regulation may lead to motivation and learning (e.g. Järvelä, Järvenoja, & Veermans, 2008; Lajoie & Lu, 2012). DiDonato (2013) explored how group regulation influenced students' self-regulated learning in a middle school environment. She found qualitative evidence from students' interactions that members of a group could regulate others' planning, monitoring, and evaluating of learning.

It remains unclear, however, whether and how self-regulated individuals shape group-level socially shared regulation in collaborative learning; reciprocally, little is known about whether and how group-level socially shared regulation influences self-regulated individuals. Socially shared regulation of learning in small group online collaborative learning often is mediated through students' engagement in asynchronous online discussions (Xie, Yu, & Bradshaw, 2014). Students post and respond to messages to externalize their knowledge and understanding. They read to internalize the group understanding to build their own knowledge (Xie, 2013). These group dynamics may then further shape individual self-regulated learning. We conceptualize this interactive process as socially shared regulation. The purpose of this study was to explore this process by examining how self-regulation of learning led to the development of socially shared regulation in collaborative learning in an online learning environment.

## Methods

### Student sample and data sources

The qualitative case study involved undergraduates taking an elective online study-strategies course at a large public university in the Midwest United States in autumn 2013. Students worked in small groups of 6-7 students over a two-month period in 5 collaborative online discussions. Each discussion occurred in conjunction with a related assignment; topics included note-taking, reading, charts/visual organizers, outlining, and changing habits. Halfway through the course, and prior to their participation in the online discussions, students completed a confidential online self-report survey. The survey was based on the Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1991) and asked students about various aspects of self-

regulated learning using a seven-point Likert-type response scale. We calculated the individual self-regulation scores to identify the groups with the best and worst average self-regulation scores. Consistent with case study methodology, we used purposeful sampling (Patton, 2002) to identify groups with the highest and lowest mean, respectively ( $M_{\text{Group A}} = 4.98$ ,  $M_{\text{Group B}} = 3.68$ ). These groups' discussion posts ( $n_{\text{Group A}} = 120$ ,  $n_{\text{Group B}} = 93$ ) became the focus of the inductive qualitative analysis.

## Analysis

Discussion posts from the course's learning management system were exported and analyzed by the first two authors. In our first round of analysis, we employed open coding to annotate salient interactions and identify topics to explore further (Corbin & Strauss, 2014). We examined all discussion posts a second time, which yielded 20 codes that reflected students' participation and engagement. We reviewed one another's annotations and reflective memos to reach shared understanding of the coding scheme, then met to reduce the codes into overarching themes that characterized differences in socially shared regulation between the two groups.

## Findings

High self-regulation led to high socially shared regulation as group members externalized (i.e., articulated) and internalized (e.g., reflected on or synthesized) their understanding. Specifically, three key differences emerged in the posts written by students in Groups A (high self-regulation) and B (low self-regulation): (1) level of engagement with content, (2) approach to seeking and providing peer help, and (3) openness to disagreement and problem-solving.

The theme *level of engagement* reflected how students explained their thinking and understanding. Interactions among students in Group A were characterized by reflection and elaboration upon course concepts. In contrast, students in Group B reused examples and descriptions from the textbook or restated content from peers' posts without further analysis.

The second theme of *seeking and providing peer help* reflected how students reached out to and assisted one another to clarify understanding and address personal challenges. Students in Group A demonstrated effective help seeking by providing specific explanations of their current processes and requesting assistance for particular challenges. In contrast, students in Group B tended to pose general questions and receive vague, repetitive responses.

The third theme of *openness to conflict and problem-solving* reflected how group members worked as a team. Group A's members expressed a willingness to disagree and explore multiple perspectives on a topic. In contrast, Group B's members leaned toward consensus rather than challenging another's ideas. When it came to working together, Group A's members exchanged ideas to reach a productive solution. In contrast, Group B did not have a clear sense of direction, and individuals took a passive role in asking others to tell them what to do.

## Conclusions and implications

This study illustrates key differences in the quality and depth of learning in online collaborative group discussions, while supporting the importance of shared regulation in this environment. Across the themes identified in this study, common elements characterized the posts of students who had high self-regulation. These characteristics included identifying tasks and needs, elaborating upon ideas, engaging in reflection, synthesizing and evaluating concepts, and inviting alternative perspectives. Students with high self-regulation personalized and clearly articulated their own examples and ways of understanding, which led to their group member's understanding and application. In contrast, the more limited contributions and engagement of students low in self-regulation did not appear to promote either individual or group learning. Our study extended the understanding of the dynamic interplay between self- and socially shared regulation to online collaborative learning contexts, where students' interactions with the content and one another often determine how well they achieve course outcomes (Didonato, 2013).

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