Literacy Practices in Online Learning Discussions

Purpose

As sites of learning continue to broaden into online spaces, the focus on understanding and interpreting learning data (Johnson, Adams Becker, Estrada & Freeman, 2014; 2015) calls for deeper investigations into online participation and literacy practices to better understand participant behaviors that may marginalize those less likely to produce expected written evidence of their knowledge. Research more deeply examining the literacy practices of reading, writing and rereading in collaborative online learning environments (COLEs) is contributing to our understanding of the relationships between these practices and learning (Qui, Hewitt & Brett, 2012; Wilton & Brett, 2014; Wise, Marbouti, Speer & Hsiao, 2011). Addressing the LRA 2015 Conference theme of “Literacy, Equity, and Imagination,” we are building on previous research by examining reading and writing behaviors in seven discussion-based graduate-level COLEs. Using an almost doubled data set, we are looking specifically at literacy patterns that involve less observable behaviors beyond written discussion entries. Students who write less in online learning discussions may appear to instructors to be less engaged.

Further, online learning is a growing learning context for diverse students from different cultures, ethnic groups and various educational backgrounds, making it important to examine a wider range of online learning practices—including reading and rereading entries—to better understand how diverse students engage in these online contexts. Understanding such patterns may help to avoid marginalizing or penalizing participants who may not have experienced similar COLE practices or who prefer to learn by reading more than by writing. Additionally, we would argue that online learning discussion environments may be better understood when examined through the lens of a dual-level theory of new literacies (Leu, Kinzer, Coiro, Castek & Henry, 2013), as online discussion environments are sites of literacy practices that have not been deeply examined from this perspective. Within this frame, we are examining reading and rereading patterns, particularly as they relate to students who may be less visible, to see how these may be useful indicators of where students are focusing while learning. A clearer understanding of these less visible literacy practices may provide instructors insight into participant engagement and understanding (Wise, Speer, Marbouti & Hsiao, 2013b).

Theoretical Framework

Historically, both constructivism (Phillips, 1995) and sociocultural theory (SCT) have been common frameworks in online learning research (Harasim, 2012; Swan, 2005). Interactions within a social environment are viewed as supportive to learning (Lave & Wenger, 1991; Vygotsky, 1978). Written entries, as they relate to participant interactions, are important to successful learning in a COLE (Sutton, 2001). Typically, as measures of participation and collaboration in a COLE, between five and 25% of a participants’ total grades (Rourke & Kanuka, 2009), have been based on quantities of entries or words (Hakkarain & Palonen, 2003) or content quality of entries (Hrastinski, 2008). However, some researchers question whether such overt participation fully captures student participation and learning (Dennen, 2008, Ho & Swan, 2007) and whether online learning discussions are being used only to provide evidence of learning rather than encouraging the exploration assumed to support the learning process (Dennen & Wieland, 2007). Moreover, less visible participants have typically been negatively referred to in the literature as passive, silent participants and lurkers (Arnold & Paulus, 2010; Nonnecke & Preece, 2003; Rovai, 2000). While reading and rereading entries in a COLE are assumed practices, few studies have investigated them as measures of student learning or engagement (Hrastinski, 2008; Wilton & Brett, 2014), or proposed considering them as perhaps new literacy practices. One earlier study noted a positive relationship between rereading and the quality of reply entries (Wise, Hausknecht & Zhao, 2013a) but research studies looking at online learning have not widely investigated less overt measures or included them in the range of literacy practices influencing online learning outcomes.

Framing this study of reading, writing and rereading behaviors are perspectives of current literacy research. Important to this study is the developing dual-level theory of New Literacies proposed by Leu et al. (2013), that describes an uppercase theory of New Literacies as an overarching framework for perspectives, disciplines and research methods that conceptualize literacy practices in digital contexts. Stated within its eight central principles are the points that literacy and learning are now supported by the Internet and related technologies where contextually-influenced new literacies are required along with related new forms of strategic knowledge (p. 1158). Additionally, this theory allows for the development of lowercase new literacies understandings in contexts that are unique and evolving due to the shifting affordances of the Internet and technology, such as the new literacies of online reading comprehension (Leu,
McVerry, O’Byrne, Kiili, Zawilinski, Everett-Cacopardo, Kennedy & Forzani, 2011) and the study of writing research from a new literacies lens (Leu, 2014).

Within this lens, we are examining less visible literacy practices in COLEs and their relationships to student learning through our central research question: *How might considering patterns of reading, writing and rereading as literacy practices more deeply inform our understanding of student engagement in online learning?*

**Methods and Context**

An embedded mixed methods exploratory case study design was used to analyze the online activities of 124 participants who attended seven fully online 12-week graduate courses. Quantitative data related to student activities and student entries was collected at a large urban Canadian university. Qualitative data was gathered from ten participants through an online questionnaire in order to understand students’ intentions and opinions related to rereading entries. All courses were taught by the same instructor where students in each course publicly posted their assignments and participated in weekly discussions.

**Data Sources and Analysis**

The quantitative measures included twenty-three variables related to student activities. Participant activities related to the reading and writing literacy practices of 10,879 entries were analyzed and SPSS Version 22 performed a good quality non-model based cluster analysis identifying reading and writing pattern groups (Green & Salkind, 2011). Three categories were identified based on reading and writing literacy patterns, with an SPSS reported good quality *silhouette measure of cohesion and separation* (0.6) (see Table 1).

**Cluster Descriptions**

<table>
<thead>
<tr>
<th>Clusters of participants</th>
<th>Hours Online* M (SD)</th>
<th>Range of % of Student Notes Written* (M)</th>
<th>Range of % of Student Notes Read* (M)</th>
<th>Range of # of Notes Written*</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Avid Readers/Writers</td>
<td>84 (30)</td>
<td>6 - 16 (9)</td>
<td>42 - 100 (84)</td>
<td>86 - 286</td>
<td>35</td>
</tr>
<tr>
<td>2 Avid Readers/Moderate Writers</td>
<td>73 (35)</td>
<td>2 - 6 (4)</td>
<td>64 - 99 (83)</td>
<td>24 - 116</td>
<td>30</td>
</tr>
<tr>
<td>3 Moderate Readers/Writers</td>
<td>49 (21)</td>
<td>1 - 8 (4)</td>
<td>11 – 63 (41)</td>
<td>17 - 147</td>
<td>56</td>
</tr>
</tbody>
</table>

*per course

**Results and discussion**
We wanted to test the robustness of promising findings from our earlier research with this new literacies lens and a larger sample because the earlier findings suggested that rereading, signifying a deliberate intention to reread an entry, was an important activity supporting learning. Table 2 illustrates the average number of hours online by cluster, along with the types of entries revisited at least once by these cluster members. When looking at rereading of teacher-created entries versus student-created entries, it appears that Moderate Readers, compared to Avid Readers, reread teacher-created entries at a higher ratio than student-created entries.

Table 2

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Hours Online M (SD)</th>
<th>Student Entries M (SD)</th>
<th>Teacher Entries M (SD)</th>
<th>Rereads by Other Students M (SD)</th>
<th>Revisited %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Avid Readers/ Writers</td>
<td>84 (30)</td>
<td>422 (188)</td>
<td>97 (26)</td>
<td>28 (17)</td>
<td></td>
</tr>
<tr>
<td>2 Avid Readers/ Moderate Writers</td>
<td>73 (35)</td>
<td>352 (118)</td>
<td>80 (17)</td>
<td>15 (8)</td>
<td></td>
</tr>
<tr>
<td>3 Moderate Readers/ Writers</td>
<td>49 (21)</td>
<td>191 (96)</td>
<td>60 (20)</td>
<td>14 (9)</td>
<td></td>
</tr>
</tbody>
</table>

Interviews with ten participants provided further insight into reasons for rereading student entries in a COLE. Participants observed that “rereading provides a richness to learning online” and is “a beneficial tool for learning.” The reasons for rereading entries have been categorized into six themes as listed in Table 3.

Table 3

Themes of Rereading Reasons

1 Rereading in order to participate in the discussion (for social purposes)

One Moderate Reader said that “it was important to reread student-generated notes to review the entire conversation (discussion posts) before I make a contribution. I hope to connect ideas with current and previous student posts.” As well, an Avid Reader reported that “I don’t have the greatest memory and so I needed to look back on ideas, especially when I had to respond to them.” Another Moderate Reader stated that “I found it helpful to revisit posts in order to help bring my ideas together and to make points or address multiple aspects of a discussion at one time.” A second Avid Reader explained that “I would also reread a note to help me remember what that peer wrote because I wanted to accurately interpret them.” A third Moderate Reader would reread in order to “check that I understood what others had communicated.”
2 **Rereading to apply to future learning**

One Moderate Reader pointed out that “I constantly re-read notes after the coursework was completed and I was working on my final paper.” An Avid Reader concurred that it was important to reread entries in order “to review ideas for the end of term paper.” Both Avid and Moderate Readers found rereading notes, even after the course had completed, helpful for ideas in other courses.

3 **Rereading in order to achieve a deeper understanding**

An Avid Reader/Moderate Writer noted that “I revisited a previously read entry because as the course evolved, my knowledge evolved (and in some cases my beliefs began to change)...and when that happened, it twigged memory of a post, or a series of posts, that had been put up earlier in the course, that I wanted to rethinking and assimilate with my new understanding.” An Avid Reader explained that “rereading the notes posted by others was a way to examine how ideas emerged and identify metacognitive processes. It was helpful to not just reread one note, but to reread threads of notes as the threads of thought often flowed in interesting ways that resulted in knowledge building.”

4 **Rereading to find models/understand expectations**

Both Avid and Moderate Readers who were new to learning in a COLE identified this reason for rereading. A Moderate Reader reported that “one student in particular was always in the good habit of using quotes. I often re-read that student’s messages to use the quotes.”

5 **Rereading in the role of weekly moderator**

An Avid Reader offered that “as a moderator, this was also key as it was often my role to provide a post or pose a question that would augment or accelerate deeper level thinking…. I felt I was able to pose questions and share more thoughtful ideas for others to either critique or build upon.”

6 **Rereading for resources**

Most respondents verified that looking for resources that had previously been posted had often lead to rereading. Some courses now have a Resources folder designed to make it easier to find resources that have been shared.

Finally, in thinking of literacy practice behaviors of students from different cultures, ethnic groups and various educational backgrounds, some of the students in this sample were participating in these COLEs from out of the country or had previously been educated in other countries. One student, Hailey, educated primarily in Korea, observed that, in her first course of this type, she didn’t know how to engage in an online discussion. She explained that “I learned how to interact with people online and found out it is a fun thing to do.” In her second COLE,
she spent 115 hours online and was categorized as an Avid Reader/Writer. Approximately 17% of her notes were reread by other students, she reread other students’ notes 261 times and reread teacher notes 102 times.

**Educational and/or scientific importance of the study**

One reason we find rereading such an interesting activity is that performing this action would not directly affect student grades, and yet students are engaged in rereading—a practice that does not have a parallel in a face-to-face classroom. As a new literacy practice, it is an important one that seems to be quickly discovered by students in COLEs, although we have yet to develop stable norms of the frequencies of, and who, revisits. In addition, two instructional design suggestions emerged from our study. One is highlighting, in the course discussion, those notes that are highly revisited for all students to see; and the second, informing the instructor of both reading and rereading patterns as an indicator of student engagement. We think that by recognizing reading and rereading as important participation activities, those students who write less (for reasons that may be cultural, experiential or related to confidence, shyness or learning style) but are actively engaged in these literacy practices may be better recognized as participating and learning. The next phase of our study will involve looking at these rereading practices in a wider range of courses across multiple instructors to more deeply understand these literacy practices in context.
References


