From ‘hello’ to higher-order thinking: The effect of coaching and feedback on online chats

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1. Introduction

After 13 exchanges of conversation by group members beginning their second online chat, Bobby expressed his frustration with their lack of progress in discussing the weekly assignment question. His small group needed to craft a posting for the class discussion board, yet it would take 51 more social and organizational exchanges before a group member offered his thoughts on the question.

Many online courses incorporate synchronous discussions that lead to shared meaning. Stein et al. (2007) suggest that individual meaning can be transformed to shared understanding during chats through questioning and collective exploration as a group. However, instructors should not to assume that learners have the necessary skills to conduct chats efficiently, integrate information, and resolve issues under discussion (Garrison & Vaughn, 2007; Wanstreet & Stein, 2011). Learners may need coaching and feedback in how to conduct chats and develop a response that improves upon what each individual group member knows about a subject (Wanstreet & Stein, 2011).

Coaching is a tool that many universities use to help students handle course content more efficiently or set goals for their education (Murphy, Mahoney, Chen, Mendoza-Diaz, & Yang, 2005; Robinson & Gahagan, 2010; Tripp, 2008). However, coaching students to improve their higher-order thinking skills online is less prevalent (Schroeder & Spannagel, 2006). In addition, feedback is perceived as a key strategy in formative assessment (Fluckiger, Tixier, Pasco, & Danielson, 2010). However, literature about electronic feedback in educational environments is sparse (Denton, Madden, Roberts, & Rowe, 2008; Tuzi, 2004). Given the importance of coaching and feedback in promoting higher-order thinking and the lack of attention in the literature to those topics in online environments, this study explored the effect of coaching and feedback in an online community of inquiry.

Because the course under study involved inquiry-based discussion, the Community of Inquiry model was chosen to provide the conceptual framework (Garrison, Anderson, & Archer, 2000). The model assumes that learning through discussion involves the interaction of three overlapping elements: teaching presence, social presence, and cognitive presence (Garrison et al.). Teaching presence involves course design and administration, discourse facilitation, and direct instruction (Anderson, Rourke, Archer, & Garrison, 2001). Social presence is the ability of learners to project their personal characteristics to others through affective language, open communication, and group cohesion (Garrison & Arbaugh, 2007; Rourke, Anderson, Garrison, & Archer, 1999). Teaching presence and social presence support the discussion group’s progress in cognitive presence (Garrison et al.). Cognitive presence involves meaning-making through sustained communication that involves triggering questions, exploration of ideas, integration of information and ideas, and resolution that provides a solution to the issue under consideration (Garrison et al.).
Integration and resolution are indicative of higher-order thinking and are the focus of this study.

Promoting higher-order learning, “becoming a critical and creative thinker,” is the purpose of higher education (Garrison, 2011, p. 12). The Community of Inquiry framework suggests areas in which students may need assistance in developing the skills to move toward higher-order learning. Providing that assistance through coaching and feedback expands the use of the CoI framework as a tool to guide and assess the discussion process in a way that complements the course activities. The course under study featured two coaches: the instructor, who provided content coaching, and the researcher, who engaged in a voluntary coaching relationship on the discussion process. In this study, we are considering the effects of the voluntary coaching.

2. Coaching and feedback

2.1. Coaching

Fundamentally, coaching is a process that enables cognitive, emotional, and behavioral changes to occur (Grant, 2001) by unlocking a person’s potential to perform at a maximal level (Whitmore, 1995). Brockbank (2008) identified the following four types of coaching: (1) functionalist, which is directive and advice-driven, (2) engagement, which uses a nondirective approach, (3) revolutionary, which promotes radical change, and (4) evolutionary, which uses reflective dialogue to identify and challenge the prevailing discourse. The course under study incorporated two types of coaching: functionalist and evolutionary. The content coaching provided by the instructor was evolutionary, whereas the process coaching provided by the researcher was functionalist. This study focuses on the results of process coaching; therefore, coaching is defined as the facilitation of learning and development by providing encouragement and direction with the purpose of improving performance (Bluckert, 2005; Brockbank, 2008; Murphy et al., 2005).

Coaching is not the same as prompting, which is giving hints or asking questions to elicit information nor is coaching the same as discourse facilitation, which models ways to promote discourse and critical thinking (Garrison, 2011). In the context of this study, the process coach pointed out errors and suggested particular behaviors rather than modeled those behaviors. In addition, discourse facilitation occurs during the course discussion. Process coaching occurred before the discussion, and feedback followed shortly after the discussion was complete. Coaching in the context of this study has a task-based focus that offers deliberative and motivational support to enhance learning and performance (Averweg, 2010; Bluckert, 2005; Longnecker, 2010).

Executive, business, and life and health coaches are well represented in the coaching literature (Averweg, 2010; Bluckert, 2005; Brown & Grant, 2010; Gilbert & Rosinski, 2008; Longnecker, 2010; Ward, 2008). However, studies specifically related to education are beginning to emerge (Austin, 2009; Etkina et al., 2010; Murphy et al., 2005; Robinson & Gaahagan, 2010; Thalluri, Kokkinn, & O’Flaherty, 2008; Vandenckervloche, 2010). Studies that explore peer coaching among students have found that it promotes active learning and relieves the teaching load (Murphy et al.; Thalluri et al.). Other studies consider coaching part of cognitive apprenticeships, which make the thinking of experts visible to the novice (Alger & Kopcha, 2011; Collins, Brown, & Holum, 1991). Sharing advice and solutions and offering suggestions and hints are elements of coaching in cognitive apprenticeships (Alger & Kopcha, 2011; Austin, 2009). A learning environment that integrates cognitive apprenticeship, including continuous coaching, as well as formative assessment helped students become more independent and approach novel tasks as scientists would when compared to a control group (Etkinia et al.).

In the course under study, coaching was conducted electronically with learners in a group. E-coaching has been characterized as a “developmental partnership” (Averweg, 2010, p. 48) that is enabled through computer-mediated communications, such as e-mail, online chat, or threaded discussion (Hernez-Broome, Boyle, & Whyman, 2007). E-coaching can be more time efficient than coaching conducted face-to-face, achieving goals more quickly and in fewer sessions (Averweg, 2010).

Group coaching is seen as a way to develop trust and support within groups, improve communication, support greater commitment, and improve knowledge transfer, among other largely anecdotal benefits (Brown & Grant, 2010). Hackman and Wageman (2005) recommend that group coaching focus on attaining specific tasks or desired outcomes. However, as Brown and Grant (2010) note, for group coaching to be effective, individuals must be willing to participate.

Although coaching has been shown to foster active learning and higher-order thinking, it is not clear how online group coaching would influence higher-order thinking and learning.

2.2. Feedback

Regarding feedback from instructors to online learners, the conventional wisdom is the more feedback the better. In this study, feedback is defined as information about the gap between the learner’s performance and the reference level (Ramprasad, 1983). Ideally, the information is used by the learner to narrow the gap. While some students adhere closely to every comment, others keep feedback in the back of their minds for later use (Higgins, Hartley, & Skelton, 2002). Effective feedback indicates what learners have done well, what misconceptions they have, and what follow-up work may be required (Denton et al., 2008). Formative feedback that is “specific, simple, descriptive, and focused on the task” creates an environment where the focus is on learning rather than on grading (Fluckiger et al., 2010, p. 137). Nevertheless, students may link feedback to attaining better grades as well as to helping them focus on skills related to higher-order thinking (Higgins et al.). In addition, in classes where the focus was on grades, most students who volunteered to receive in-depth feedback on a literature review assignment and subsequently revised their drafts improved their final grade (Unsworth & Kauter, 2008).

Immediate feedback is necessary to maintain motivation (Denton et al., 2008), keep learners engaged, correct errors, and meet learner expectations that their work is noticed (Tailent-Runnels, Cooper, Lan, Thomas, & Busby, 2005). Timely and constructive feedback increases course satisfaction by changing student perspectives about the course (Lee, Srinivasan, Trail, Lewis, & Lopez, 2011). If feedback is not timely, learners may not make the effort to go back to the assignment and learn at a deeper level (Higgins et al., 2002). Feedback is also useful to keep learners on task and to provide guidance on how to navigate through an academic chat room (Stein et al., 2007). Stein and Wansstreet (2008) have suggested that in the absence of feedback, learners in a chat room will allocate their time in social, teaching, and cognitive presence in a similar way from chat to chat. Over time, without coaching or feedback, learners do not seem to change their strategy for achieving resolution; nor do learners change the pattern of how they allocate their chat time. That finding supports the notion that process feedback can facilitate performance by helping learners develop an effective task strategy (Earley, Northcraft, Lee, & Lituchy, 1990).

Loewen and Erlam (2006) varied the type of feedback in an online class on language acquisition. Feedback was either implicit (response is correct or not) or explicit (response is correct or not and the reasoning behind the correct response). The researchers found no significant difference in the performance of the groups on either oral or written examinations because of the type of feedback received. The researchers noted that feedback was not immediate due to the ways
in which chat messages are received. Also noted was the idea that when feedback was provided, learners were not asked to make an immediate correction. Thus, a delay in receiving and acting upon feedback might hamper performance.

Although students consider individual feedback helpful, they also value group feedback (Parikh, McReelis, & Hodges, 2001), which has been shown to help groups make better decisions (Klijacic & Skraba, 2004) and increase performance (Tittelbach, DeAngelis, Sturmeys, & Alverno, 2007). In addition, group feedback fosters a “collective orientation” that directs attention toward the group as the relevant entity and the individual as one aspect of the larger group (Van der Vegt, de Jong, Bunderson, & Molleman, 2010, p. 348). As a result, individuals are motivated to think about what they can do as a group to improve performance (Van der Vegt et al.).

Feedback has been studied in the group development literature as it relates to time and group efficacy. Pescosolido (2003) found that fostering the impression of group efficacy early on led to improved short-term performance and positively affected long-term effectiveness. Baker (2001) studied how group efficacy changed over a four-month time span as groups received feedback on a meaningful task. As team members worked on problem-solving tasks over time, their assessment of group efficacy increased if they had regular access to performance feedback.

Providing immediate, focused yet simple feedback to individuals and groups can help meet learner expectations and maintain motivation to learn. However, the effect of immediate group feedback delivered online remains unclear. Therefore, our understanding of how the combination of group coaching and group feedback influences cognitive presence is incomplete.

2.3. Coaching and feedback in communities of inquiry

Regarding coaching within the Community of Inquiry framework, Shea, Li, and Pickett (2006) note that students may need to be coached in teaching presence to reduce reliance on directed facilitation from the instructor. This is particularly appropriate in courses that feature learner-led discussions conducted simultaneously in different virtual locations, such as the one under study. Student- and group-led discussions may suffer from a lack of content expertise that inhibits the group’s ability to integrate information and ideas and encourage critical reflection (Garrison, 2011). Although Rourke and Anderson (2002) call for teacher guidance in student- and group-led discussions, the literature is sparse regarding coaching the learner-led discussion process within the Community of Inquiry framework. A contributing factor may be that learner-led discussions are not the norm, according to a recent study by Lynch, Kearsley, and Thompson (2011). They found that only 1% of all online discussions in courses taught by 126 faculty members at two universities were facilitated by learners.

A number of studies are emerging that address feedback (Akyol & Garrison, 2011a; Akyol, Garrison, & Ozden, 2009; Diaz, Swan, Ice, & Kupczynski, 2010; Getzlaf, Perry, Toffner, Lamarche, & Edwards, 2009; Haavind, 2007; Kovalik & Hosler, 2010; Lambert & Fisher, 2009; Lowenthal & Lowenthal, 2009; Nagel & Kotzé, 2010; Rockinson-Szapkiw, Dunn, & David, 2010). Most of these studies involve administering the Community of Inquiry questionnaire (Arbaugh et al., 2008; Swan et al., 2008), which devotes the following two questions to feedback as an element of teaching presence: (1) The instructor provided feedback that helped me understand my strengths and weaknesses, and (2) The instructor provided feedback in a timely fashion.

The majority of studies using the CoI questionnaire report on the category of teaching presence as a whole rather than on the individual items, such as feedback, that comprise teaching presence. However, in their study of the CoI questionnaire, Diaz et al. (2010) found that students perceived the degree to which the instructor provided timely feedback as theoretically important (mean = 4.4) yet not present to the extent they desired (mean = 4.1). Similarly, they identified a gap between the importance the students ascribed to instructor-provided feedback that helped them understand their strengths and weaknesses (mean = 4.3) and its presence in the course (mean = 4.0).

Lowenthal and Lowenthal (2009) used the CoI questionnaire to study students’ perceptions of teaching presence across different academic disciplines. They found that instructor-provided feedback was perceived as the least manifest element of teaching presence by students in the humanities/social sciences (mean = 3.5) and computer/information sciences (mean = 3.3). Kupczynski, Ice, Wiesnemayer, and McCluskey (2010) categorized qualitative data according to the teaching presence categories of the CoI questionnaire. They found that lack of course success was attributed to lack of instructor feedback by students enrolled in programs awarding certificates and associate’s degrees as well as bachelor’s, master’s, and doctoral degrees.

Among research based on the Community of Inquiry framework that explores the effect of feedback without using the questionnaire, Haavind (2007) found that feedback to virtual high school students about the number of times students participated in discussions was enough to raise the quality of the dialogue. Confirming that feedback is a crucial element of teaching presence, Getzlaf et al. (2009) note that students want to use instructor feedback in two ways: to improve future assignments and to apply the feedback to practical situations in their daily lives. In addition, they found that students viewed effective feedback as a mutual process that includes establishing mutually agreeable timelines for feedback, thus sharing power and diminishing the one-way transmission of information prevalent in higher education (Getzlaf et al.).

Although research into feedback is aided by the CoI questionnaire, further research is needed to assess the effect of electronic feedback based on coaching in particular categories of teaching presence and social presence. Therefore, this project was designed to answer the following research question: What effect did the coaching and feedback intervention have on the level of cognitive presence in online synchronous discussions?

Based on the literature, we can hypothesize that using the CoI framework to identify errors in the discussion process and providing coaching and feedback to correct those errors will result in a higher level of cognitive presence during the chat than might be achieved without coaching and feedback.

3. Method and procedures

This exploratory study assessed how teaching presence and social presence help groups move to higher levels of learning. The groups were part of a graduate/undergraduate-level course at a large Midwestern university in the history and philosophy of adult education in America. During the 10-week blended course, learners met in class three times and participated in synchronous inquiry-based discussions five times. Online learner-led chats that empower learners toward greater self-direction are a feature of the course. The coaching and feedback intervention was provided for each inquiry-based discussion.

During the first class, learners (N = 29) were randomly assigned to six discussion groups. The co-investigator explained the study and distributed consent forms to the class. After class, one group was randomly selected for continuous coaching and feedback interventions by the co-investigator. The co-investigator contacted the group that was selected and reiterated the voluntary nature of the study. A second randomly selected group served as the control. All groups received feedback on the content of their chats from the instructor. The treatment group had five members: three men and two women. The control group also had five members: three men
and two women. Each group was comprised of four graduate students and one undergraduate student. Specific roles, such as that of the moderator and discussion summarizer, rotated among group members. Coincidentally, the moderator of the group that received continuous coaching and feedback was the same person at Week 3 and Week 9 when the chat text was analyzed.

Although it would be preferable to have larger group sizes for statistical purposes, that would not be ideal pedagogically. Brookfield and Preskill (2005) recommend that groups have four or five members when the goal is to discuss issues from reading assignments, as was the case in this course. Nielsen and Molich (1990) found that a group size of five promotes productivity; and groups with as few as three members were found to maintain high levels of social presence, suggesting that complex tasks may benefit from using small groups (Lowry, Roberts, Romano, Cheney, & Hightower, 2006).

Of particular interest to this study is the effectiveness of a teaching presence and social presence coaching and feedback intervention in increasing cognitive presence. The intervention was outside the course expectations, and participation was voluntary. The coaching intervention occurred shortly before each chat, and feedback occurred within one hour after each chat, for a total of five sessions.

Coaching and feedback were informed by the CoI teaching presence template (Anderson et al., 2001) and the CoI social presence template (Garrison & Arbaugh, 2007; Rourke et al., 1999). In the teaching presence category of instructional design and organization, coaching focused on naming a moderator and summarizer for the following week so that undue time was not spent organizing the group each week. In terms of direct instruction, members were coached to summarize the discussion before moving on to the next part of the question. Regarding facilitating discourse, the group was coached to gain agreement that the response reflects the input of all group members. Because facilitating dialogue and summarizing the group's position are complex instructional tasks, they required repetitive coaching over time to take effect (Stein & Wanstreet, in press). Social presence coaching promoted the use of cohesive language, such as “we, our, and us” to show the learners working together and coalescing as a group. Feedback assessed how well the group achieved the goals of the coaching.

In this study, we define summarizing as recapping the main points of the discussion. Summarizing the discussion is an indicator of the direct instruction category of teaching presence (Anderson et al., 2001). An example of a summary from Anderson et al. is: “The original question was . . . . Joe said . . . . Mary said . . . . we concluded that . . . . We still haven’t addressed . . . .” (p. 10).

In the course under study, group members were asked to identify a different summarizer each week. The simple, directive coaching instructions were: “Summarize where you are before moving on to the next question, and check for everyone’s understanding.” The feedback related to summarizing was as follows:

I counted about three instances that looked like summary statements, which were supplemented by some of the other group members. It’s good that the rest of you expanded on those statements. That should help Alice [draft the discussion board posting]. It’s difficult to know when to summarize. You want to do it before moving to the next question, but you may not know when the next question is coming up. Going forward, the moderator can signal that it’s time to move on or can ask for a summary to see where the group is headed regarding an answer.

Summarizing aids integration, which is part of cognitive presence and represents higher-order thinking. Integrative statements synthesize various perspectives and connect ideas and information from readings, experiences, and other sources (Garrison, Anderson, & Archer, 2001).

Presenting questions and injecting knowledge from the readings are other indicators of direct instruction in which learners were coached in the current study. Those skills also aid the cognitive presence categories of triggering events (e.g., presenting background information that culminates in a question, per Garrison et al., 2001) and integration (e.g., integrating information from various sources, including textbooks and articles, per Garrison et al.). Fig. 1 illustrates how providing coaching and feedback in these teaching presence categories can lead to cognitive presence.

A quantitative content analysis of transcripts from group chats was used to determine frequencies of teaching presence, social presence,

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**The Coaching, Cognitive Presence, and Feedback Cycle**

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**Fig. 1.** Coaching provided before the Week 9 chat emphasized integrating readings with opinions, summarizing, and checking for understanding. Excerpts from the group’s chat showed evidence of integration, a higher-order thinking skill. Feedback immediately after the chat acknowledged what the group did right. Throughout the term, weekly feedback fed the subsequent week’s coaching.
and cognitive presence indicators. Although any reading of text may be considered qualitative, this study did not develop themes or new research questions from the text, which is indicative of qualitative research (Krippendorff, 2004). Nor did this study reinterpret the text into new narratives. Instead, units of meaning were mapped to published guidelines for teaching presence, social presence, and cognitive presence and quantitative analysis was applied (Krippendorff, 2004; Neuenfors, 2002). Four transcripts were analyzed to track changes over time: one from each group at Week 3, the first learner-led chat, and one from each group at Week 9, the final chat. Three coders working independently determined the units of meaning (in this study statements and paralanguage) that represented teaching presence, social presence, and cognitive presence according to the indicators contained in templates developed by Anderson et al. (2001) for teaching presence; Rourke et al. (1999) and Garrison and Arbaugh (2007) for social presence; and Garrison et al. (2000) for cognitive presence.

Reliability testing was conducted on the transcripts using Krippendorff’s (2004) alpha because this chance-corrected measure accommodates ratio data and multiple coders. Interrater reliability for all chat transcripts (α = .96, .97, and .99) surpassed the theoretical minimum of 80% (Riffe, Lacy, & Fico, 2005).

4. Results

A repeated measures ANOVA was conducted to assess differences between learners who received the coaching and feedback intervention and those in the control group in the frequency of cognitive presence at the beginning and end of the term. Table 1 shows the means and standard deviations for each group’s frequency of cognitive presence at the beginning and end of the course. Table 1 also includes the minimum and maximum frequency scores to help illustrate why the standard deviations are high. For example, one learner in the control group contributed five statements indicative of cognitive presence during Week 3 (time 1) while a second learner in that group contributed 41 statements coded as cognitive presence. With such a double-digit spread in both groups at both times, the mean is a poor estimate of any single learner’s frequency of cognitive presence statements.

Table 2 shows a change over time for cognitive presence between the coached group and the control group. The interaction between group and time is significant for cognitive presence (F (1,10) = 7.8, p = .02), and the effect size (η² = .50) is medium (Cohen, 1988). Results also indicated no significant main effects of group (F (1,10) = .59, p = .46), or time (F (1,10) = 2.8, p = .13). Neither coaching by itself nor time by itself brought about a change in the frequency of cognitive presence. However, the group that was coached over time produced a statistically significant higher frequency of cognitive presence than the control group by the end of the term.

Table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Time 1</th>
<th></th>
<th>Time 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Max.</td>
<td>M</td>
<td>SD</td>
<td>Min.</td>
</tr>
<tr>
<td>Control</td>
<td>5</td>
<td>5</td>
<td>41</td>
<td>28.8</td>
<td>14.8</td>
</tr>
<tr>
<td>Coached</td>
<td>5</td>
<td>2</td>
<td>47</td>
<td>28.2</td>
<td>17.9</td>
</tr>
</tbody>
</table>

Table 2

Repeated measures Analysis of Variance.

<table>
<thead>
<tr>
<th>Effect</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>296.5</td>
<td>1</td>
<td>.59</td>
<td>.464</td>
<td>.07</td>
</tr>
<tr>
<td>Time</td>
<td>120.1</td>
<td>1</td>
<td>3.78</td>
<td>.134</td>
<td>.26</td>
</tr>
<tr>
<td>Group × time</td>
<td>344.5</td>
<td>1</td>
<td>7.86</td>
<td>.022</td>
<td>.50</td>
</tr>
</tbody>
</table>

Note: Alpha = .05.

In addition, the coached group produced more integrative statements and more resolution statements than the control group during the final chat (see Table 3). Thus, the coached group demonstrated even more evidence of higher-order thinking during the chat discussion at the end of the term.

5. Discussion

In this case, the results suggest that time by itself will not bring about a change in the frequency of cognitive presence. Nor will a coaching and feedback intervention by itself influence the frequency of cognitive presence. However, if a group is continuously coached and provided with feedback in teaching presence and social presence over time, group members may increase the frequency of higher-order cognitive presence compared to members of an un-coached group. The notion of coaching in teaching and social presence reflects the assertion by Garrison et al. (2000) that those presences support cognitive presence.

Because this is a small study, we are not generalizing the results beyond the groups studied. However, in this case, the results lead to the following assertions:

1. Coaching that occurs shortly before a chat and feedback that is provided immediately afterwards can increase the level of cognitive presence. The results suggest that coaching and feedback will help learners increase their knowledge of the inquiry process, ask questions to confirm their understanding, and facilitate inquiry, among other metacognitive activities (Akyol & Garrison, 2011b).

2. Continuous coaching and feedback is more effective in increasing the level of cognitive presence than intermittent coaching and feedback. The results support Etkina et al. (2010) and Stein, Wanstreet, and Simons (2008) regarding the importance of continuous coaching and formative assessment. Coaching in discussion processes and feedback about the gap in those processes need to occur continuously throughout the course.

3. Coaching and feedback related to the discussion process is simple, directive, functional, and task-based. Feedback complements the coaching in that it identifies gaps between the coaching tasks that were encouraged and the performance. Therefore, coaching and feedback are iterative and build on each other.

The course under study featured coaching and feedback related to (1) course content and (2) the discussion process. The course instructor presented and reinforced content, which is part of teaching presence (Anderson et al., 2001) and factored into the course grade. The discussion process coaching and feedback, however, were presented and reinforced by the researcher and were extra-curricular. The researcher had no power to influence grades, and participation was voluntary. The coaching and feedback intervention was not conceptualized as part of teaching presence because it was outside the normal activities of the course. Rather, the intervention was a way to help learners voluntarily improve their performance. As such, the intervention promoted independent learner-led discussions by providing tools that would help responsible learners accomplish their course goals. Although the optimal amount of coaching and feedback required is unclear, this study shows...
that cognitive presence can improve with as few as five coaching and feedback sessions. This study also supports a new use for the Community of Inquiry templates. Currently, the templates are used primarily for analytical purposes to describe what has occurred after the learning experience is complete. This study shows that the templates can be used proactively while the course is under way to encourage specific behaviors that will lead to higher-order thinking in learner-led discussions. The templates offer a range of categories, indicators, and examples that can be used to target coaching and feedback to meet the specific needs of learner-led discussion groups.

6. Conclusion

Higher-order thinking involves synthesizing and integrating information to move the group to resolution of the issues under discussion (Garrison et al., 2000). Although chats did not account for all of the cognitive presence learners displayed during the course, the chats did act as a foundation on which groups built final drafts of discussion postings that demonstrated integration and application of new knowledge (Shea et al., 2010). The continuous coaching and feedback intervention used in this study helped increase the ability of learners to judge when to change their course of action (Earley et al., 1990; Stein & Wanstreet, 2008) and engage in higher-order thinking.

Academic chats are not a natural form of discourse for many students, and creating meaning during the course of a few weeks is difficult. Coaching and feedback helped develop discussion process skills in this case. The positive result in this exploratory study suggests that coaching and feedback in the context of the CoI framework is worth pursuing with larger groups or with multiple small groups (Lowry et al., 2006).

Learner-led discussions can promote critical thinking, responsibility taking, and insight into assumptions adults hold about themselves as learners (Brookfield & Preskill, 2005; Vella, 2002). Continuous coaching and feedback can reinforce the power of learner-led discussions to foster more interdependent learners so they can conduct inquiries and model problem solving and collaborative learning. In addition to promoting teaching, social, and cognitive presence, continuous coaching and feedback can contribute to a successful course. Groups benefiting from coaching and feedback will have the tools to move deliberately from “hello” to higher-order thinking.

References


