Cognitive Presence in Ethics Training: A Comparison of Online and Face-to-Face Learning Communities

Alana Mantie-Kozlowski
Missouri State University, Springfield

ABSTRACT: Purpose: To compare the quality of cognitive presence in graduate students’ online and face-to-face discussions of ethical dilemmas that are of either high emotional impact (HI) or low emotional impact (LI).

Method: Thirty speech-language pathology graduate students were randomly assigned to 1 of 3 groups. Groups participated in 4 discussions: 1 HI and 1 LI, in a face-to-face and an online modality. Analysis of the students’ texts was completed using a taxonomy for cognitive presence derived from Anderson, Archer, Garrison, and Rourke (2001). Comparisons by modality and dilemma type were made with respect to triggers, explorations, integrations, and resolutions.

Results: Within the online discussion modality, the proportion of triggers and explorations exceeded that of integrations and resolutions. Contributions in the face-to-face modality were more likely to be integrative than those in the online modality. Resolutions were rarely offered in either modality. Scenarios with HI elicited significantly more triggers than scenarios with LI.

Conclusions: Cognitive presence was noted in both modalities and dilemma types; however, the nature of the contributions differed. Recommendations for instructors are offered so they may take advantage of the natural contributions that students provide in specific environments. Also, strategies to facilitate all levels of cognitive presence are suggested for specific modalities and dilemma types.

KEY WORDS: ethics, speech-language pathology, graduate training, online
was to add to a body of literature regarding when and how to use online learning effectively—if at all—to train ethics in the field of CSD.

Although the number of online graduate programs in CSD is currently small (10), CSD programs are progressively adding more online courses, as well as blended (or hybrid) model courses, to their curricula (ASHA EdFind, n.d.). Even traditional face-to-face classes commonly incorporate “e-tivities” into the course design, including collaborative writing assignments (Hewitt, 2010), peer tutoring (Anderson, 2008), and online learning community discussions (Brook & Oliver, 2003). Although e-tivities may seem novel and distinct to instructors, graduate students expect them to be part of their education (Cook, 2009). Some evidence suggests that on average, the student outcomes from online learning do not differ significantly from outcomes from traditional methods (Cook, 2009), and they may even be superior to the face-to-face delivery method (U.S. Department of Education, 2009). If this is the case, instructors in CSD will want to know how to best tailor their courses to take advantage of alternate teaching modalities.

The advantages reported by instructors using online learning communities in higher education are plentiful. The U.S. Department of Education meta-analysis (2009) found that students who took all or part of their classes online performed better on average than those taking the same classes through traditional face-to-face instruction. Researchers have noted increased cognitive and exploratory learning (Haggerty, Schneberger, & Carr, 2001), and although not unanimous, some researchers have reported more developed critical thinking skills, in online learners (Collison, Elbaum, Haavind, & Tinker, 2000; Eklund & Eklund, 1996; Newman, Webb, & Cochrane, 1995; Shapley, 2000).

Students have reported that they found online discussions more equitable and more democratic than live classroom discussions (Harasim, 1990; Levin, Kim, & Riel, 1990). Greater student empowerment (Kassop, 2003; Kubala, 1998), increased student-to-student conversation and collaboration (Kassop, 2003; Rovai, 2004), and increased participation by students who are uncomfortable with speaking out in class have also been noted.

Not all reports of online course activities have been favorable, however. Students who participated in online coursework expressed that they faced challenges with time management (Song, Singleton, Hill, & Koh, 2004), with taking greater responsibility for their own learning, and with using technologies (Vaughan, 2007). Students have also reported less affective support from their online instructors (e.g., care through listening, encouraging students to share ideas, using personal examples, and providing humor) than from traditional classroom instructors (Mullen & Tallent-Runnels, 2006). Also, there is not unanimous agreement that the level of critical thinking achieved in the online environment matches that achieved in face-to-face environments (Bullen, 1998; Ward & Newlands, 1998).

A paucity of studies have investigated the use of online practices for educating students in CSD graduate programs. Instructors who are adding online components to their courses may want a better understanding of how to use e-tivities in their instruction to maximize the critical thinking skills of their students. As one example, training on ethical decision making is an important component of training programs in the field of CSD; however, limited time is available to develop these skills in graduate study. Pannbacker, Lass, and Middleton (1993) found that accredited graduate programs spent <20 hr of training on ethics.

Ensuring that students develop the needed competencies to recognize moral considerations in the professional context and facilitate the acquisition of skills necessary for graduates to participate in ethically weighted decision making is a daunting task. Ethics content is typically infused into students’ graduate-level courses (Pannbacker et al., 1993) rather than offering a separate course with a focus on ethics. Using online discussion boards for developing ethics topics in an asynchronous learning environment may be an option for instructors. However, the planning, learning, and instructor effort that goes into constructing and teaching an online portion of a course is considerable, and educators will want to tailor their e-tivities to aspects of the course where it is best suited.

Recently, Loncke, Dudding, and Kim (2009) investigated the use of online discussion forums for training ethics in CSD. They explored participant performance in terms of the degree to which the characteristics of a facilitator impacted the quality and development of participant discourse as well as the degree of change in decision making that occurred as a result of participation in the discussions. One discussion group was led by a facilitator who was a content matter expert, another group was led by a noncontent matter expert, and a third group had no assigned facilitator. Loncke et al.’s results did not support the importance of facilitator content knowledge for online ethical dilemmas. Although the presence of even a novice facilitator influenced the number of words per posting and the extent to which the participants explored ideas, participation in online discussions of ethical scenarios did not change the students’ perception of the dilemma.

Developing skills in critical thinking has consistently been cited as a prime objective of all types of education (Fahy, 2005). Cognitive presence is grounded in the critical-thinking literature (Garrison et al., 2001). Garrison et al. (2001) asserted that higher order critical thinking requires questioning and challenging assumptions through the dual processes of engagement in internal reflection and community-based discourse, resulting in the generation of experience and knowledge. Our study investigated the cognitive presence of third-semester speech-language pathology graduate students as they engaged in face-to-face and online discussions of ethics that were of HI and LI.

We asked the following research questions:

- Does the modality of discussion (face-to-face versus online learning community) have an effect on the qualitative nature of the students’ responses in terms of cognitive presence?

- Does the qualitative nature of the responses differ for dilemmas that are HI (i.e., physical abuse) versus LI (i.e. procedural) in either the face-to-face or the online learning community?
METHOD

Participants

Study participants included 30 students who were undertaking a graduate degree with a focus in speech-language pathology from a program that was accredited by ASHA’s Council of Academic Accreditation. The cohort was in its third semester of a 5-semester program. All participants reported that they had previous experience with online discussions in their academics. Students were randomly assigned to one of three groups. Two participants were males, and through random assignment, both were in Group 1. All three groups participated in the face-to-face discussions and the online discussions, as well as in one discussion that was LI and one that was HI in each modality.

Because individuals in a group discussion are often at different stages in Garrison et al.’s (2000, 2001) process of critical thinking, and because some students may have had more training in ethics than others, it was considered important that the performance of the same group of students be analyzed in both modalities. Before initiation of the study, participants agreed to take part in a research study that was designed to investigate students’ response to various teaching modalities.

Four ethical dilemmas were presented from the Loncke et al. (2009) study (see Appendix). These researchers selected each dilemma after field-testing them with a group of experienced speech-language pathologists (SLPs). Per the authors, during field testing, each dilemma was identified as having HI or LI. A dilemma was considered to have HI if the problem involved a severe infraction of personal values or had lasting consequences. A dilemma was considered to have LI if the problem described had a limited infraction or temporary consequences. The dilemmas were counterbalanced in their presentation. See the Loncke et al. study for additional details regarding the dilemmas.

Face-to-Face Discussion

Participants engaged in a small (n = 10) face-to-face group discussion of two ethical dilemmas (one LI and one HI). A written copy of the dilemma was given to each participant, and before the discussion commenced, it was read to the participants by the course professor, who served as the facilitator. Discussions were audio-recorded and transcribed. The transcript was created for the particular purpose of analyzing cognitive presence, which predetermined the target behaviors and how the transcription proceeded (see Muller & Damico, 2002).

Online Discussion

One LI and one HI ethical dilemma was presented to each online learning community for 1 week each using the Blackboard system. This system was used extensively during the course for case-based learning projects; therefore, specific training was not necessary for this study. Participants were required to post at least three responses over the period of 1 week, which was consistent with the course syllabus for all of the case-based learning projects. The responses were archived for analysis.

Analysis

Content analysis is a generic name for a variety of textual analyses that typically involve comparing, contrasting, and categorizing a set of data (Schwandt, 1997), in this case, the contributions that the students made in their online and face-to-face discussions. Analysis of the text responses was completed using a taxonomy for cognitive processes that was derived from the work of Anderson, Garrison, Archer, and Rourke (see Anderson, Rourke, Archer, & Garrison, 2001; Garrison, Anderson, & Archer, 2000, 2001; Rourke, Anderson, Archer, & Garrison, 1999). The model, termed the practical inquiry (PI) model, is intended to be efficient, valid, reliable, and practical for the use of both educators and researchers. It is designed to evaluate the learning process of individuals who are collaborating in asynchronous online discussions (Garrison et al., 2000), and it has been used in studies comparing face-to-face and online discussions in educational settings (Heckman & Annabi, 2005).

The PI model considers education to be based on experiences and learning in an educational context applied to real-life situations (Garrison et al., 2001). The PI model allows for an investigation of cognitive presence via four phases that are considered crucial for the understanding of critical thinking in the educational context (see Table 1 for definitions). There is a cyclical concept in the framework, involving a progression through phases, beginning with a trigger, moving through exploration, to integration, and achieving final resolution.

Before coding, the transcripts were read through several times by the primary investigator and a trained graduate student in order to obtain a sense of the whole discussion. Then, both investigators read the transcripts together, coding the text that was cognitive in nature. The face-to-face transcripts were coded by conversational turn, and the online transcripts were coded by posted message. Not all statements in the transcript were categorized: Obvious examples were coded, but those that fell into shades of gray were not. As noted by Newman, Webb, and Cochran (1999), this can ease the coding task as there is less need for subjective and/or borderline judgments. Any discrepancies between the two investigators within each group were discussed until consensus was reached. Table 1 presents examples from the text.

RESULTS

From the face-to-face discussion transcripts, 483 of the student contributions were considered characteristic of the cognitive phases, and from the online transcripts, 645 of the student contributions were considered characteristic of the cognitive phases. The proportion of coded contributions in each of the phases under investigation is presented in Table 2.
Table 1. The four phases of cognitive processes.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Defined</th>
<th>Descriptor</th>
<th>Example from face-to-face transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triggers</td>
<td>Starts a discussion or line of thought; presents new ideas to the group</td>
<td>Evocative</td>
<td>Is it even legal to turn off someone’s AAC device?</td>
</tr>
<tr>
<td>Exploration</td>
<td>Brainstorming, identifies assumptions and information</td>
<td>Inquisitive</td>
<td>I think you’re saying that teachers have control over who’s speaking but teachers don’t really have control over when kids are speaking. Yeah they raise, the ones that do raise their hand they can choose, but not the ones who are poking their neighbor, so you know, do you think…</td>
</tr>
<tr>
<td>Integration • Connecting</td>
<td>Connects ideas and constructs resolution Use of metaphors, analogies, similes, and relationships</td>
<td>Tentative</td>
<td>That would be like taking a handicapped child’s wheelchair away. To go along with your point, they say that kids are acting out in class a lot of the times they are trying to tell you something that they don’t know how to tell you. That’s sad that we’re saying he falls into a category of bad behavior</td>
</tr>
<tr>
<td>• Inference</td>
<td>Induction and deduction; admitting or proposing an idea on the basis of its link with propositions already admitted as true</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Judgment</td>
<td>Makes evaluation of others’ ideas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>Comes to conclusions and recommendations</td>
<td>Committed</td>
<td>Research shows that all students benefit when they’re learning and working with students with disabilities so show them the facts.</td>
</tr>
<tr>
<td>Uncoded</td>
<td>n/a</td>
<td></td>
<td>One teacher during my instruction, but then others are kinda jumping on, and so doesn’t this…</td>
</tr>
</tbody>
</table>

Table 2. Proportion of student contributions by phase.

<table>
<thead>
<tr>
<th>Modality</th>
<th>Trigger</th>
<th>Exploration</th>
<th>Integration</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>27%</td>
<td>21%</td>
<td>44%</td>
<td>8%</td>
</tr>
<tr>
<td>Online</td>
<td>35%</td>
<td>34%</td>
<td>19%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Within each of the four phases, the coded contributions were compared in the face-to-face and online modalities. Also, a comparison of the LI and HI contributions was made in each of the phases. The results are presented in Tables 3 through 9.

There were significantly more triggering contributions made during the online discussions than during the face-to-face discussions: \( \chi^2(1, N = 356) = 12.64, p < 0.05 \). There were also significantly more triggering contributions when HI scenarios were discussed compared to LI scenarios: \( \chi^2(1, N = 356) = 6.17, p < 0.05 \).

There were significantly more explorative contributions produced during the online discussions compared to the face-to-face discussions: \( \chi^2(1, N = 323) = 22.76, p < 0.05 \). There was not a statistically significant difference in the number of explorative contributions made when students discussed LI versus HI scenarios: \( \chi^2(1, N = 323) = 0.82, p = 0.37 \).

There were significantly more integrative contributions produced during the online discussions compared to the face-to-face discussions: \( \chi^2(1, N = 323) = 22.76, p < 0.05 \). There was not a statistically significant difference in the number of integrative contributions made when students discussed LI versus HI scenarios: \( \chi^2(1, N = 323) = 0.82, p = 0.37 \).

There were significantly more judgment contributions made during the face-to-face discussions than during the online discussions: \( \chi^2(1, N = 157) = 10.77, p < 0.05 \). The difference in the LI and HI face-to-face contributions that connected ideas: \( \chi^2(1, N = 51) = .25, p = 0.62 \); nor was there a significant difference in the number of contributions that connected ideas in the LI versus HI scenarios: \( \chi^2(1, N = 51) = 2.3, p = 0.13 \).

Within the integration phase, the number of inferences made during the face-to-face discussions and the online discussions was not statistically significant: \( \chi^2(1, N = 128) = 2.27, p = 0.13 \). Also, the difference in the LI versus HI scenarios was not statistically significant for inferences: \( \chi^2(1, N = 128), p = 0.62 \).

Within the integration phase, there were significantly more judgment contributions made during the face-to-face discussions than during the online discussions: \( \chi^2(1, N = 157) = 10.77, p < 0.05 \). The difference in the LI and HI
Table 5. Number of occurrences of integration contributions by modality and level of emotional impact.

<table>
<thead>
<tr>
<th>Modality</th>
<th>LI</th>
<th>HI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>93</td>
<td>121</td>
<td>214</td>
</tr>
<tr>
<td>Online</td>
<td>63</td>
<td>59</td>
<td>122</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>180</td>
<td>336</td>
</tr>
</tbody>
</table>

Table 6. Number of occurrences of integration: Connecting ideas contributions by modality and level of emotional impact.

<table>
<thead>
<tr>
<th>Modality</th>
<th>LI</th>
<th>HI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>7</td>
<td>22</td>
<td>29</td>
</tr>
<tr>
<td>Online</td>
<td>10</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>34</td>
<td>51</td>
</tr>
</tbody>
</table>

Table 7. Number of occurrences of integration: Inference contributions by modality and level of emotional impact.

<table>
<thead>
<tr>
<th>Modality</th>
<th>LI</th>
<th>HI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>39</td>
<td>38</td>
<td>77</td>
</tr>
<tr>
<td>Online</td>
<td>30</td>
<td>21</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>59</td>
<td>128</td>
</tr>
</tbody>
</table>

Table 8. Number of occurrences of integration: Judgment contributions by modality and level of emotional impact.

<table>
<thead>
<tr>
<th>Modality</th>
<th>LI</th>
<th>HI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>47</td>
<td>61</td>
<td>108</td>
</tr>
<tr>
<td>Online</td>
<td>23</td>
<td>26</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>87</td>
<td>157</td>
</tr>
</tbody>
</table>

Table 9. Number of occurrences of resolution contributions by modality and level of emotional impact.

<table>
<thead>
<tr>
<th>Modality</th>
<th>LI</th>
<th>HI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>16</td>
<td>22</td>
<td>38</td>
</tr>
<tr>
<td>Online</td>
<td>40</td>
<td>35</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>57</td>
<td>113</td>
</tr>
</tbody>
</table>

The qualitative nature within the categories of cognitive presence differed significantly by modality. In the online modality, the proportion of contributions in each of the phases of inquiry was similar to that reported in other studies that have used the PI model to investigate critical thinking in online learning formats. That is, for the online modality, fewer instances of integrations and resolutions were coded relative to triggers and explorations (Fahy, 2005; Garrison et al., 2001; Meyer, 2003). This differed in the face-to-face group setting and as members of an online learning community. We were interested in the quality of the students’ contributions in terms of their cognitive presence—the ability to construct and confirm meaning through sustained reflections and discourse. We also wanted to find out whether the nature of the students’ contributions differed for dilemmas that were of high emotional impact versus low emotional impact, in either modality of discussion.

**Modality of Discussion**

Overall, the online discussions generated more contributions that were cognitive in nature than did the face-to-face discussions. All e-tivities for this course required the students to make at least three contributions per assignment in order to receive credit for participating, and the online discussions of ethical dilemmas were no exception. The number of student contributions in the online modality ranged from two through seven per student, with the majority of students contributing three times (i.e., the assigned minimum). Although rarely going above the minimum turns of posting to the discussion board, almost every student’s online contribution was coded into at least one phase of the cognitive model. This was not the case during the face-to-face discussions. For the face-to-face discussions, the students were required to attend, but there was no stipulated number of student contributions required in order to receive credit. The range of turns taken was much broader in the face-to-face modality, with 3/30 students taking ≥1 turn at talk, and 3/30 students taking ≥30 turns. The median number of turns at talk was 7 during the face-to-face discussions; students offered comments more frequently in this modality compared to online. However, fewer of these contributions demonstrated cognitive presence.

During the face-to-face interactions, students joked, apologized when their chairs collided, offered tissues when a classmate sneezed, and so on. The social nature of face-to-face group discussions was evident in the transcript. It would be tempting to point to the online modality as the more efficient means for ethics discussions, where students remained focused on the task at hand without wasting discussion time on noncognitive contributions. Although this may be true, some caution is warranted. Social presence, along with cognitive and teaching presence, is considered to be fundamental for creating supportive learning environments (Rourke, Anderson, Garrison, & Archer, 2001). Social presence (i.e., posts that contain personal expressions of emotions, values, approval, salutations, and group references; Rourke et al., 2001) has been linked to student satisfaction and success in online coursework (Swan & Shih, 2005).

The purpose of this study was to compare the contributions made by CSD students as they discussed ethical dilemmas...
face-to-face discussions, where the majority of the contributions were integrations (44%). There was ample opportunity to display integrative skills with these ethical scenarios in either modality. However, students merged the SLP’s role as an advocate, educator, innovator, and possible administrator with their clinical skills, educational experiences, and aptitudes more readily during the face-to-face interactions. In fact, during an online discussion, one student’s contribution seemed to suggest that in his or her view, the face-to-face modality would be a superior environment for integrating and/or resolving issues (i.e. “Something about that situation sets a little strangely with me, but I can’t put my finger on it. I could see this situation arising, so I would like to talk about this aspect in class”).

To investigate this finding more, we compared subcategories of integration (e.g., connecting ideas, inferences, and judgments). The frequency with which ideas were connected and inferences were made was similar in both modalities. Rather, it was in the area of judgment that students made more contributions during their face-to-face discussions than when participating in the online learning community. Of the cognitive categories coded, judging (defined in Table 1 as “makes evaluation of others’ ideas”) required students to monitor the contributions of others, more than for any of the other categories. Although probably not the intention of an instructor who is incorporating group activities into his or her course, students can brainstorm, connect ideas, and resolve without actually attending to the contributions of others in a discussion. This is not the case for judging as defined in the PI model. Students may have found it easier to attend to the contributions of their fellow students in the face-to-face modality, or conversely, students may have found it easier to not attend to the posts of others in the online modality. If students failed to read the posts that proceeded their own, they could not judge them. Or, if students did read the posts, they may have been reluctant to offer a judgment of others in such a permanent format as an online discussion board. Alternatively, the increased number of judgments coded during the face-to-face discussions could be related to the metalinguistic concept referred to as phatic communication, which is a discourse convention for initiating a turn at talk through linking to a contribution that has gone before (e.g., “I think Suzy has a good idea, but I was thinking…”).

The frequency with which students offered resolutions was relatively low for both the online and face-to-face discussions. Garrison et al. (2001) believed that instances of resolution were more frequent in discussions where the participants valued applied knowledge. Although the specific values of the students who participated in this study are unknown, the course was designed to promote applied specific values of the students who participated in this study. Of the cognitive categories coded, resolutions were more frequent in discussions where the participants valued applied knowledge. Although this study did not specifically mention that the students preferred the online setting to the traditional classroom because they had a chance to contribute their opinions, valuing the added time to do so. However, in our study, the difference between the number of resolutions contributed in the online and face-to-face discussions was not statistically significant and represented the fewest contributions in both the face-to-face (8%) and the online (12%) discussions.

Online discussions require a marked expansion of the time devoted to a particular class. Almost every graduate student interviewed in Meyer’s (2003) study mentioned how much time it took to read others’ postings, think about a response, prepare a response, and check back later to see others’ contributions to the discussion. These graduate students in CSD who are balancing clinical practice and coursework may not have used their time to reflect on the dilemmas, but rather posted during the times that were convenient to meet the minimum requirements for the class. Of the 30 students who participated in our study, 19 posted the minimum necessary to obtain credit for participation, and 7 posted below the minimum. Additionally, 11 students posted back-to-back comments, which may not have allowed time for reflection between posts. Aside from the issues of time, Garrison et al. (2001) also suggested that individuals might hesitate to offer resolutions in public settings because they fear that an inadequate solution would be met with rejection. Both modalities of discussion were public; however, posting online has the added component of permanency, which may heighten students’ fears.

LI Versus HI

Overall, there were more contributions that demonstrated cognitive presence when students discussed HI scenarios than when they discussed LI scenarios. In the first phase of practical inquiry, triggering contributions were significantly more frequent in the HI condition, regardless of the modality of discussion. As such, the students offered more new ideas to the discussions that were of higher emotional impact. Triggering contributions have been described as those that support student engagement as students work to generate constructive ideas and recognize the problem presented (Garrison & Anderson, 2003). The participants of this study devoted time toward defining the problem in the HI discussions. These behaviors suggest that students were still in an information-seeking phase.

It has been reported that although students are often able to demonstrate conceptual understanding within their discipline of study, they rarely question their own initial beliefs on a subject, sometimes performing mental gymnastics to avoid confronting and/or revising their thinking (Bain, 2004). During discussions of HI scenarios, these CSD students devoted a great deal of their time to probing the problems presented. Although this study did not investigate whether students changed their views as a result

Mantie-Kozlowski: Cognitive Presence in Ethics Training 55
of participating in the discussions, the students did appear to want to learn more about the issues rather than move on to the other stages of the PI model prematurely. Fewer new ideas were presented when the students discussed LI ethical dilemmas. The topics for discussion in LI were more procedural in nature (see Appendix), and students moved on to exploring, integrating, judging, and resolving, without much attention devoted to initiating new lines of thought.

Conclusion

The purpose of this study was to compare the quality of cognitive presence in graduate students’ online and face-to-face discussion of ethical dilemmas that were of HI or LI. This information may assist instructors in tailoring their courses to the needs of their students in CSD. The findings from this study suggest that each modality elicits critical thinking, and that perhaps some phases of the Garrison and Anderson (2003) model are better suited to a specific modality.

To create a community of inquiry where interaction and reflection are sustained and where ideas can be explored and critiqued (Garrison & Cleveland-Innes, 2005), an integrated approach using both face-to-face and online discussions of ethical dilemmas may be best. For this current sample of students, online discussions generated more triggers, suggesting that students may be best suited to begin the inquiry process online and to explore and brainstorm together during asynchronous postings. The integration of ideas, where meaning is constructed from the ideas generated in the previous phases, may be better suited to face-to-face discussions. Finally, if students are reluctant to offer public postings or to verbally offer resolutions, then written assignment used to round out training might be warranted.

Course instructors and/or facilitators may want to be prepared with prompts and scaffolds to encourage triggering in LI scenarios so that students will fully question dilemmas regardless of whether the dilemma is presented in a face-to-face or online modality. Perhaps more integrative contributions and resolutions will naturally follow. Obviously, some instructors do not have the flexibility to integrate both face-to-face and online modalities into their courses. Even those instructors who teach solely online or completely in a traditional setting should anticipate the need to facilitate, especially for resolution.

Limitations

The task of assessing the thought process of individuals is inductive. Triangulating measures, including a poststudy interview to supplement the transcripts, is recommended for future studies.

The discussions analyzed in this study were specifically related to ethics in CSD. It is unclear if students discussing other topics would use similar cognitive processes.

REFERENCES


Heckman, R., & Annabi, H. (2005). A content analytic comparison of learning processes in online and face-to-face case study...


Contact author: Alana Mantie-Kozlowski, Missouri State University, Department of Communication Sciences and Disorders, 901 South National Avenue, Springfield, MO 65897. E-mail: alanamantiekozlowski@missouristate.edu.
Dominic – High Impact
You have been working with Dominic for a while. He has cerebral palsy and no functional speech. The AAC assessment that you have requested, proposed the use of a speech-generating device for Dominic. His trial with the communication device has opened up a new world for him! For the first time he is able to communicate with others using speech output. It will allow Dominic to say and ask everything he wants and greatly add to his independence. While in the early stages of learning to use the device, Dominic accidentally hits the speech buttons and generates speech that is often irrelevant, too loud, and, frankly, disruptive for the class. One of the teachers routinely has another child turn off Dominic’s communication device during instructional times. Several of the teachers question whether Dominic really needs it. They believe he can learn as much just by listening and have the speech output turned off, and we should not use the device at all. That makes administrators question whether the expense of the device is worthwhile. As the speech language pathologist, what should you do?

The Husband – High Impact
You work in a rehabilitation center as a speech-language pathologist. One day you are asked to evaluate a client who has suffered a stroke and has no functional speech. The client and her husband are close friends of your parents. Soon after your evaluation, you have been able to give her a communication device that allows her to express simple messages with picture symbols. The training goes well: She is able to express basic ideas with fair reliability. She is attempting to communicate verbally with some success. One day, she points to the symbol for “John” (her husband) and makes a vehement gesture. Is she trying to tell you that her husband hits her? Other professionals report similar events. At first, you find it hard to believe but the thought keeps bothering you. What should you do?

Parents Request – Low Impact
A parent of one of your clients wants you to try a new approach to treat their child with autism. The treatment approach is not yet proven to be fully effective and is somewhat controversial. But the parents of your client are convinced it will work and so are some of your colleagues. The parents have offered to pay for you to be trained in the technique. You are not sure. Evidence from the literature is inconclusive. Your professional organization recommends caution but does not recommend the practice. What should you do?

The Experiment – Low Impact
You and your clients are asked to participate in an experiment. The experiment is harmless (IRB approval etc.) but it takes away considerable time from the treatment that you have planned for your clients. Still, you feel that your participation will lead to a better understanding of the nature of the disorder and that, in the long run, more clients will benefit from this. What should you do?