# Community of Inquiry: Designing Quality Online Instruction for Special Educator Preparation

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## ABSTRACT

Online education programs are on the rise and institutions of higher learning are utilizing Learning Management Systems (LMS) to facilitate online learning. The Community of Inquiry (CoI; Garrison et al., 1999) framework identifies three categories of cognitive presence, social presence, and teaching presence to guide the development of online instruction and has been adopted by numerous institutions of higher learning. This article identifies instructional strategies conducive to the design of online presence using the CoI framework to ensure quality learning experiences in online special educator preparation programs. We address some of the features of LMS system tools present in Canvas that are utilized by instructors when designing and implementing online instruction to include: communications, modules and assignments, collaboration, and grading.

## KEYWORDS

**Canvas, community of inquiry (CoI), learning management system (LMS), online learning, special educator preparation**

*Dr. Smith teaches special education courses for online graduate students at a university in a small town in the Midwest. Most of the students in her courses work as teachers and do not come to campus. Last semester, Dr. Smith had a few students struggling to catch up on course assignments. She believes the lack of synchronous interactions in online courses potentially caused the challenges. In the course evaluation reports of the previous semester, students expressed a disconnection with the instructor and peers, along with feelings of anxiety from not knowing what exactly has to be done in courses. Dr. Smith begins investigating what framework can be utilized in her course design to serve the online students better and found the 'Community of Inquiry' framework that has been well established for decades. Now, she reviews some of the literature that discussed practical examples and decides to incorporate some practices into her own online courses. Her university uses the learning management system (LMS) Canvas, therefore, Dr. Smith outlines strategies that can be implemented in Canvas considering the framework.*

Educator preparation programs have increasingly grown in online presence. In 2013, The American Association of Colleges for Teacher Education (AACTE) reported online educator preparation programs were offered by up to 75% of universities. Online learning has escalated in popularity due to its flexibility and customizability to meet the learning needs of students (Allen & Seamen, 2016; Cui, 2013; Richardson et al., 2017), by eliminating geographical barriers to accessing instruction for many students wishing to pursue degrees in special education. Learning Management Systems (LMS) are utilized by higher education institutions to facilitate online learning experiences. A broad array of LMS is available in higher education to select from (e.g., Moodle, Google Classroom, D2L Brightspace, Schoology, Blackboard Learn, Canvas, Sakai), and multiple factors need to be considered in selecting an LMS depending on the learning objectives and goals in providing the instruction. Canvas has become a prevalent part of the LMS market, and has been adopted by school districts, colleges, and universities throughout the United States. In school districts, the adoption of Canvas is widespread. For example, Vermont

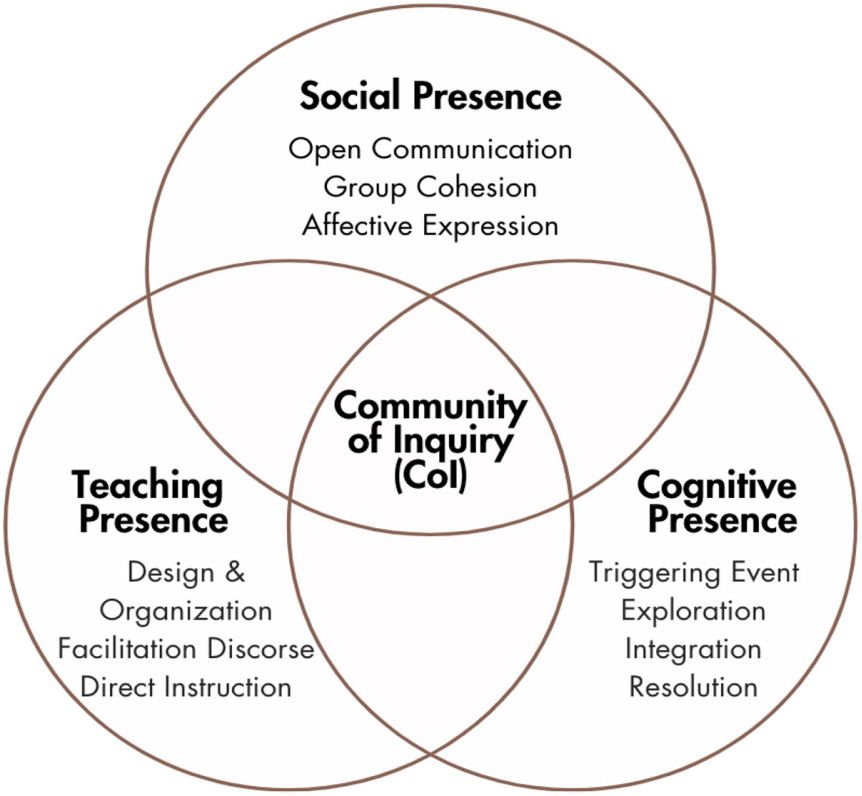
and Virginia have incorporated the use of Canvas within their statewide virtual school programs, and there are more than 1.5 million students using Canvas in Texas (PRNewswire, 2020). Universities have followed suit in adopting Canvas to include Stanford, Florida State University, Cornell University, Mississippi State University, and many others (Etherington, 2018). Factors that have led to the widespread adoption of Canvas in schools as an LMS include its functionality in facilitating online collaboration and communication (Etherington, 2018).

Online educator preparation, no doubt, extends beyond geographical boundaries and impacts the type of instruction pre-service and in-service special educators receive at both the undergraduate and graduate level. Due to the widespread adoption of Canvas as the LMS utilized by online special education programs at colleges and universities nationwide, we address some of the features of LMS system tools present in Canvas and utilized by instructors when designing and implementing online instruction to include communications, modules and assignments, collaboration, and grading. This is by no means exhaustive of the kinds of applications that can be utilized in Canvas to design instruction. Our main objective here is to provide online special educator preparation programs and instructors with a variety of tools that are available in Canvas to support implementing the Community of Inquiry (CoI) framework. In this article, we introduce various ways to adopt the ideas from the CoI framework using real-world examples.

## Community of Inquiry Framework

Quality instruction for special educators can ensure preparedness in teaching as well as increase rates of retention (Boe, 2014). Anderson and Garrison (1995) and Clark (1994) discussed the application of technology in designing instruction, and in particular, its role in quality online learning. Th CoI framework was developed by Garrison and his colleagues (1999) as a response towards identifying instructional key categories for facilitating positive online learning experiences and outcomes in higher education. The CoI framework follows a constructivist philosophy to online education (Rovai, 2003). Descriptors of constructivist learning environments have been posited by Lebow (1993) to include provision for the social aspects of learning, equipping students with opportunities to engage in the knowledge construction process with self-awareness and ownership, entertaining multiple points of view, developing alternative representations of content, and experiencing relevance and authenticity in instructional activities.

**FIGURE 1:** CoI categories and elements *(Garrison & Arbaugh, 2007)*




According to Garrison et al. (1999), quality online instruction entails educators establishing three categories of presence: (a) cognitive, (b) social, and (c) teaching. Categories of presence along with indicators that provide detailed descriptions of how to address each category have been outlined by Garrison and Arbaugh (2007, p. 159; see Figure 1). Categories of social presence include open communication, group cohesion, and affective expression, and aim to develop open dialog, which is facilitative of ongoing communication and the development of a community. Teaching presence encompasses ongoing instructional activity by the instructor in designing, organizing, and facilitating online instruction and consists of design and organization, facilitating discourse, and direct instruction. Cognitive presence indicators include active exploration or engagement of participants

through an ongoing reflective process in the construction of meaning. Cognitive presence can be incorporated within the design of content and learning activities by ensuring students are given the opportunity to engage in reflective thought. The elements of the three CoI categories can overlap each other and must be considered holistically when designing online courses.

### Adopting the CoI framework

LMS can be utilized by instructors to secure students' access to information and interact with their instructor, peers, and content through the facilitation of the development of cognitive engagement presence, social presence, and teaching presence outlined in the CoI framework. The CoI categories and indicators can be implemented with various functionalities into the current LMS (e.g., Canvas, Blackboard) provided, such as in group discussion boards, learning modules, quizzes, videos, or blogs. Collaboration and engagement play important roles in organizing ideas and creating new sets of knowledge from dynamic learning activities (Dede, 1990; Rovai, 2003).

Key features of LMS include enabling instructors to provide students with announcements, post instructors' conference hours, and actively engage in communicating with students (Bradley, 2021). In addition, instructors can use LMS features to post course content and provide structure to outline course material in modules and assignment tools. Instructors can utilize discussions as a tool to encourage the active engagement (e.g., sharing and structuring experiences and knowledge) of students within an LMS. In addition to providing students with the ability to connect with their peers in discussions and through collaborative assignments (e.g., developing a group presentation), LMS also have a grading tool by which instructors can post student grades and provide ongoing feedback.

## COMMUNICATIONS

Communication tools in Canvas are essential to implementing the CoI framework and supporting social and teaching presence. There are various ways to digitally communicate with students in an online course, to facilitate teaching presence, such as email conversation and conference meeting software (e.g., Zoom, Microsoft Teams). Communication tools available in Canvas have been identified here to include Conversations, Chat, Conferences, Announcements, and Discussions. Online students can easily feel disconnected and lose track of course progress due to a lack of real-time contact with instructors and peers (Rush, 2015). Teaching presence is essential to students feeling supported in an online course. In a study carried out by Watson et al. (2017) to assess graduate students' recommendations for instructors in supporting their online learning, students cited instructors' responses to queries in a timely fashion as a major factor. Instructors should answer student emails in a timely fashion so as to facilitate student learning (Lowenthal & Parscal, 2008). Instructors can ensure students are feeling motivated and on-task in completing assignments by consistently maintaining open communication with their students (Johnson, 2014), thereby facilitating teaching and social presence in online courses. Special educators must be equipped with certain communication skills to manage various collaborative situations with different stakeholders. Facilitating the communication between instructors and students using various methods in online environments may positively impact students' future competency in collaboration when teaching.

### Conversations, Chat, and Conferences

The Conversations tool allows instructors to compose and receive emails from students. Chat is also featured in Canvas and offers users the ability to engage in real-time communications. Any messages sent in chat, including chat history, are viewable to all students enrolled in the course and can be a valuable tool for instructors responding to course content questions, as all students can view responses. The Conferences tool enables instructors to hold synchronous online meetings with students using a conferencing software, BigBlueButton, that enables recordings of meetings to be stored for a period of two weeks.

#### *Practical Applications for Instructors in Special Education*

To create an engaging learning environment, special education instructors can start the course by sending a welcoming email in Conversations that is illustrative of personal attention and informs students about other communication options like Chat. Consistent encouragement messages can also be helpful to keep motivating students who may easily get anxious or overwhelmed with the information provided online. Instructors can offer flexible conference options (e.g., open office hours) to provide additional support for successful course completion, using Conferences; reminding students to set up conference meetings is important when they need support, considering many students are working in the field and the graduate work simultaneously.

### Announcements

Instructors can utilize the LMS tool of announcements to regularly provide students with relevant details on course structure and upcoming assignments and to actively communicate with students. By doing so, students are able to gain a sense of the instructor's presence in the course while also facilitating an overall sense of social presence for students.

Formatting options are available in rich text editor, which enables instructors to include video and imagery in their posts, as well as delay the posting of announcements, and enable students to respond in kind.

Instructors that regularly post announcements can facilitate student engagement and learning through ensuring that teaching presence is accounted for in an online course. Announcements can be posted on a weekly basis to provide students with relevant course updates on deadlines for assignments through text, audio, and video content and thereby decrease student anxiety about upcoming events in the course (Lowenthal & Parscal, 2008). Instructors can model the use of affective expression to include sharing personal stories and using emoticons to facilitate social presence. The use of affective expression can ensure students are able to experience a sense of group cohesion and belonging, thereby negating a sense of isolation in an online course (Lowenthal & Parscal, 2008).

### *Practical Applications for Instructors of Special Education*

Regular and consistent posts by special education instructors can ensure that students feel a sense of connection with their instructors and can facilitate teacher-student communication. Special education instructors can incorporate audio and video into announcements in Canvas to create this social presence. Special education instructors can post announcements that reflect professional experiences from conferences they attend and can make use of emoticons, share personal stories, and communicate their reflections. For example, posts can be developed to share relevant information and sources via announcements to include posting potential funding opportunities, research articles, news updates, and collaborative and professional growth opportunities to support students in their studies. Special educator instructors can facilitate the opportunity for social presence to be developed in the design of the course by enabling students to post replies or like replies to announcements to ensure a common understanding among students using Canvas (Canvas, n.d.). Students in special education programs can also be enabled to post content in announcements that can be shared with the whole class to encourage collaborative work, which is considered a critical skill for special educators who are required to work with various stakeholders (e.g., parents, general educators, administrators, related service providers) to support students with disabilities.

## Discussion Tool

Collaborative activities should be developed to be equitable and consideration of cultural differences in communication should be rightly addressed to facilitate social presence (Rovai, 2007). Promoting diverse points of view and their application into course content facilitates student participation through cognitive engagement (Rovai, 2007). Divergent perspectives can be supported by ensuring students are entertaining multiple points of view in their responses to content in student discussions (Stephens & Roberts, 2017). Instructors should provide students with multiple means to interact and respond to one another by utilizing blogs, wikis, and online journals to develop their ideas and interact (CAST, 2018). Wikis and blogs can be valuable tools for instructors to utilize in providing multiple options for students to engage in discussions via technological applications. Ensuring content and references (including in-/outside- course materials) are accessible enriches discussions and scaffolds the students' understanding, reflection, and consequent cognitive engagement in discussions.

Instructors can model the types of interactions that students are expected to engage in within the course (Dolan et al., 2017; Dunlap & Lowenthal, 2018), provide students with explicit instruction on how to interact with one another in discussions (Stewart, 2017), and set clear expectations and understanding on how to engage in group-work skills (Stephens & Roberts, 2017) which are active in engaging in online discussions. Providing students with ground rules to engage in discussions enables students to understand the expectations of the instructor in the course (Rovai, 2003). Instructors can also develop a participation rubric tool that prompts students to evaluate and respond to each other's discussion posts and can also pair students in discussions with similar interests. In addition, instructors can require students to respond to others' posts by assigning grades to course discussions as a source of motivation to increase student engagement and foster the development of an active learning community (Rovai, 2003, 2007).

Dialog present in discussions enables students to engage in the active construction of learning through writing and reflection on posted content (MacKnight, 2000; Rovai, 2003). Instructors can actively encourage dialog among students as a facilitator and provide thoughtful insights in addition to reframing questions that may arise in an online discussion (Trammell & LaForge, 2017). Instructors can use online discussions to ensure clarification of concepts but should refrain from being a dominant presence in online discussions so as not to dampen students' participation (Mazzolini & Maddison, 2007; Paloff & Pratt, 1999; Trammell & LaForge, 2017). Instructors can ensure effective online discussions are occurring in their courses by utilizing strong prompts to encourage student reflexivity (Rovai, 2007). Moreover, instructors' replies to students' discussion posts should be promptly answered which may also ensure that conversations do not stall.

**TABLE 1:** Suggested Activities within Canvas and Across Categories of CoI Framework

| Canvas Function | COI Categories | | | Suggested Activities |
|---|---|---|---|---|
| | S | T | C | |
| **Communications** | ■ | | | Send a welcome email to increase student engagement |
| | ■ | | | Provide various options to communicate (e.g., email, message, conference) |
| | ■ | | | Respond to emails and messages from students promptly |
| | ■ | | | Offer flexible conference options (e.g., open office hours) for extra support |
| **Announcements** | ■ | ■ | | Utilize affective expression to personalize announcements |
| | ■ | | | Allow students to respond to announcements (i.e., text, audio, video) |
| | | ■ | | Post frequent announcements of course assignments and expectations to facilitate course structure and provide explicit explanations and directions |
| **Discussion** | ■ | | | Create learning profiles and discussion posts for student introductions |
| | ■ | ■ | ■ | Explicitly model appropriate discussion post interactions supportive of diverse perspectives, provide meaningful comments, and accessible content |
| | ■ | ■ | | Use affective expression |
| | ■ | | ■ | Encourage student reflections using multiple options/platforms for expression and accessibility |
| | | ■ | ■ | Provide prompts for discussion posts, but discussions are led by students |
| | | ■ | | Be available to meet with students |
| **Modules and Assignments** | | | ■ | Provide scaffolding (e.g., prompts) for higher-order thinking |
| | ■ | | ■ | Utilize various features to foster reflective analysis and self-exploration. |
| | | | ■ | Co-construct and design learning experiences to increase student engagement |
| **Collaboration** | ■ | | ■ | Develop community structure, account for individual student interests, relevancy, and background in developing assigned groups |
| | ■ | | | Include a peer review process |
| | ■ | | ■ | Provide explicit instruction and rubrics to students for collaborative project-based work, individual work, and evaluation by team members |
| | ■ | ■ | | Ensure students can access a collaborative communication platform |
| | | ■ | ■ | Provide immediate feedback and the opportunity to meet with the instructor |
| | | | ■ | Give students choice in developing projects aligned with learning objectives |
| | | | ■ | Incorporate student self-reflection, synthesis, creativity, and design |
| **Grading** | ■ | | | Provide timely grading and feedback to develop rapport with students and facilitate learning |
| | | | ■ | Provide students with rubrics to evaluate their work, peers, and themselves |
| | | | ■ | Encourage multiple points of view and active student reflection in grading/commenting on student work |
| | | | ■ | Scaffold support into the grading/commenting of student work |
| | | ■ | | Align coursework and assessments with learning goals |
| | | ■ | | Set clear instructions and expectations for assignment completion for students meeting learning goals in course |
| | | ■ | | Give consistent feedback; interact regularly with students via grading comments or email |

*Note. S = social presence; T = teaching presence, C = cognitive presence.*

### *Practical Applications for Instructors in Special Education*

Special education instructors can use discussion posts by prompting students to think about current trends and issues in special education in order to promote and encourage discussion and cognitive engagement in reflecting on content. To support meaning-making via discussion activities, special education instructors can spend some time reading the discussion posts carefully and connect the discussions into actionable and practical suggestions with constructive and timely feedback for students to reflect on. In an online special education course, instructors can provide students with the opportunity to lead in the discussion by designing and debating special education content and concepts (e.g., the role of technology in supporting inclusion; inclusion as a practice; instructional design; developing individualized education programs [IEP]) provided in the course, but instructors can also use group discussion and group brainstorming to support students' development of ideas as a mediator. Consistently providing special educators with the opportunity to engage in discussion with one another is essential to facilitating social and cognitive presence in an online course.

*Dr. Smith considered ways to use the communication applications in Canvas to facilitate social presence and teaching presence in her course. She decides that she will develop weekly announcements to give an overview of content and assignment deadline information, provide students with individual conference meeting options, and use the discussion board to initiate student introductions. For her first post, Dr. Smith creates a welcoming announcement via a video and text. Dr. Smith introduces herself, relating her previous experiences as a special education teacher and provides some background information about her interests in teaching special education. She also turns on the Canvas functionality of allowing students to reply to announcements. In the discussion board, students were asked to introduce themselves by sharing their interests and what they expect to learn from the course. Dr. Smith finds through the introductory discussion that she not only facilitated social presence for her students by giving her students the opportunity to connect with one another, but she also instilled a sense of teaching presence that increased her capacity to assess her students learning needs.*

## MODULES AND ASSIGNMENTS

Instructors can utilize learning modules and assignments to structure course content for students to create cognitive presence. Modules are the primary tool that is used in an LMS to post learning content according to the major course objectives and is essential for guiding students. Instructors can facilitate cognitive presence in learning modules and activities of an online course through instructional design that is relevant to learners' needs. Instructors that ensure flexible options for accessing content and completing assignments are present in Canvas and can help to personalize learning for students. The module contents should be multimedia, including real-world learning materials that intrigue students' interests and motivations and help connect their previous experiences and knowledge to new concepts. Students that are given choices in how they submit their work or access content (e.g., podcast, video, text, organizational chart, PowerPoint) are better able to engage in creative exploration that facilitates cognitive presence and experience a positive affective response in an online learning environment. Instructors can ensure that content is flexibly designed and accessible for diverse learners by using the universal design for learning (UDL) framework (Dunlap & Lowenthal, 2018) to provide options for students to access content in a variety of ways, as well as submit their products in variable formats to illustrate their learning (CAST, 2018). The provision of multiple means of access to content allows students' individual learning needs to be met and facilitates cognitive presence.

### Practical Applications for Instructors in Special Education

Special education students can engage in reflective analysis through a plethora of options to engage in conveying ideas (e.g., develop a flowchart, create a PowerPoint presentation, develop and write a paper, submit a video, develop a podcast; CAST, 2018). Special education instructors can provide students with direct instruction through utilizing a variety of media tools to vary the instructional methods and address the variability of learners via video posts, podcasts, or text. It is essential to connect course materials within modules to assignments so that students can utilize them correctly. For example, instructors can use various state and district level policies and forms when teaching special education law courses to better help students be able to apply their knowledge into practice. By doing so, the students can understand the importance of utilizing learning materials that reflect real-world contexts, which are directly applicable to one's life.

*Thinking about cognitive presence, Dr. Smith re-evaluated how her course modules and assignments have been previously set-up. From her course evaluations, Dr. Smith knows that her students have expressed confusion as to what they need to be doing. She considers how students' confusion impacted their ability to not only learn the content, but to stay caught up on course assign-*

*ments. Dr. Smith has already decided to post weekly announcements to help students understand more of the core content and assignment deadlines, but in thinking on the matter more deeply, she decides to restructure her course. Dr. Smith modifies her course modules and assignments to provide multiple ways to access the content. She provides an array of resources from documents used in school districts to peer-reviewed research papers. She incorporates videos (with captions) and different visuals to support students' better understanding of the concepts discussed in each module. She also decides to provide a rubric for each assignment with multiple options for students to show mastery of their learning. Students will be empowered to choose the assignment format in submitting their work, such as podcasts, papers, or flow charts.*

## COLLABORATION

Instructors can provide students with a sense of social presence by using collaboration tools to assign students to groups for working on projects. The provision of group project-based assignments in an online course can ensure that students are able to meet with their peers and engage in the active process of team building, establishing rapport with one another, and developing their overall ideas through active dialog and exchange, thereby facilitating social presence. Project-based assignments give online students the opportunity to create learning products that are relevant and applicable to their teaching. Students that are given the opportunity to work on projects together are better able to develop relationships with one another and engage in the exchange of ideas, to ensure a sense of social presence (Dunlap & Lowenthal, 2018; Trammell & LaForge, 2017). Social engagement facilitates not only social presence in a course, but cognitive presence for students.

In addition, it is important for instructors to establish a teaching presence in scaffolding and guiding group project activities by ensuring students are able to engage in collaboration and have the necessary tools to communicate with one another and sufficiently engage in group discussion. Instructors should use descriptive rubrics to facilitate understanding of how students' work will be assessed, provide scaffolding for group members by ensuring members of groups are able to draw up a group contract that accurately depicts their shared responsibilities, and facilitates members' accountability to the group, thereby establishing teamwork and providing explicit instruction on how to engage with one another in completing projects.

Instructors who provide group project-based assignments that are designed to allow students to create, design, and develop learning products can facilitate the synthesis of ideas for their students' cognitive engagement based on their interests and needs. Projects can be designed so as to encourage students to engage in thought-provoking dialog in relating ideas, self-reflection, and analysis, that is supportive of cognitive presence in an online course. By providing students with relevant, meaningful, and engaging content that is appropriately scaffolded to be supportive of collaborative activity, instructors can facilitate cognitive, social, and teaching presence in their online courses.

### Practical Applications for Instructors in Special Education

Online special educators should consider how to incorporate individual interests in collaborative projects (e.g., multi-tiered system of support [MTSS], transition plan, UDL, behavior management), background knowledge in teaching grade levels, as well as content areas to work on a project. In designing group project-based assignments, special education instructors can utilize a peer-review process so as to encourage critical thinking, reflection, and ongoing synthesis of ideas across groups through an iterative design process. For example, special education students can develop presentations on content (e.g., reading strategies for dyslexia, assistive technology, legislation and policy surrounding special education) and review one another's work.

Group project-based assignments distinguish collaborative work and are essential for developing special educators who experience various collaborative tasks, such as IEP meetings.

For example, instructors could group students based on their teaching levels (e.g., elementary, secondary), students' exceptionalities (e.g., disability categories or severity), educational placements (e.g., inclusive education setting, self-contained classroom, life skill classroom) to foster active interactions with similar backgrounds and interests.

*Dr. Smith wants to ensure that her students are able to engage in shared social experiences that will help alleviate a sense of disconnection or isolation. Dr. Smith realizes that she could create a collaborative group-project in addition to using the announcement and discussion posts to facilitate a sense of social and cognitive presence among her students. Dr. Smith could easily group her students according to the grade levels they each teach to make the content more meaningful and relevant to her students' learning needs after reading their introductory discussion posts. She develops a group-project to explore the uses of assistive technology in the field of special education. Dr. Smith provides her students with a rubric and a peer contract that specifies what each group member's contribution must be to the project to provide*

*clarity and avoid confusion while also giving the students choices in how they would like to best communicate with one another (i.e., email, text, google chat). She encourages her students to engage in active dialog to complete the assignment. Students will collaborate by using a Google document to develop a schematic that highlights the types of assistive technology they each use in their teaching, as well as outline the types of assistive technology most prevalent in special education. The project-based assignment will enable her students to engage in social exchanges to not only share their knowledge, but to engage in a project-based research activity.*

## GRADING

Timely grading and teacher-student interactions are essential to model immediate feedback for students and provide students with a sense of teacher presence (Dunlap & Lowenthal, 2018; Lowenthal & Dunlap, 2018; Watson et al., 2017). Given online modules lack synchronous, face-to-face human interactions, quick grading can provide sufficient time for students to modify their work based on instructors' feedback and provide students with a model of positive teacher-student interactions. SpeedGrader is Canvas's grading tool and can be used by instructors to grade student assignments with feedback. Objective and thoughtful feedback should be provided to let students monitor their progress in learning. Rubrics and point allotment systems always need to be in place to guide objective grading and be shared with students. Canvas can be automatically set to notify instructors of students' graded submissions to prompt the instructor to provide students with feedback, and support students' sense of teacher presence. Students given immediate feedback and allowed to engage in an iterative process of designing and redesigning/modifying their work may be more cognitively engaged in completing project-based assignments. The incorporation of audio and video into feedback can also facilitate a sense of social presence for students in an online environment (Lowenthal & Parscal, 2008).

One simple strategy to connect with students is to address them by their names when posting comments and feedback. In doing so, rapport may be established to foster comfortable communication between instructor and student(s) and to interact with students on an individual and personal level (Dunlap & Lowenthal, 2018).

Instructors should also align course activities and relevant assessments to course objectives. Having clear expectations of assignments is necessary to minimize potential confusion. Deadlines with frequent prompt reminders are helpful for students to complete assignments on time. Feedback should correct students' misconceptions of the topic. The feedback should be timely and could be delivered in multiple ways, such as videos, rubrics, and audio (CAST, 2018). Interacting in a consistent manner with students via the Canvas gradebook comment feature allows students to receive frequent opportunities to receive instructor interactions that are facilitative of ensuring students are experiencing teacher presence. Instructors can comment on students' work using humor, when appropriate, and with personality to create a sense of connection and teaching presence in Canvas (Dunlap & Lowenthal, 2018).

### Practical Applications for Instructors in Special Education

Special education instructors can use the grading feature of Canvas to comment in the Gradebook on assignments and provide timely feedback to support students' ideas, and students can also respond to instructor feedback. A dialog can be created between the special education instructor and student to facilitate learning with the use of rubric systems with constructive feedback. Because progress monitoring has been more accessible than ever using Gradebook, special education instructors can make better instructional decisions with student data. Student feedback, such as ideas, thoughts, and feelings can be also considered when structuring courses and developing assignments. By experiencing the reciprocal grading process, special educators would be better equipped with the knowledge and skills to better serve students with disabilities in online learning environments.

*Dr. Smith realizes that she could use features within Canvas's grading tools to connect more with her students outside of announcements and discussions. Because her students have previously reported a lack of connection with their instructor in course evaluations, Dr. Smith decides to intentionally use the grading tool to foster a greater sense of teaching presence. Dr. Smith uses Canvas grading notifications to alert her to student submissions of assignments which enables her to provide prompt feedback. Dr. Smith believes that prompt feedback will allow her students to more quickly understand their progress and have less anxiety about assignment performance. In addition, any misconceptions can be caught earlier so that students do not keep repeating mistakes across multiple assignments due to delayed feedback. Through prompt grading, Dr. Smith creates the opportunity for students to understand content in more depth, re-submit their work, and stay caught up in the course before advancing on to their next assignment.*

## CONCLUSION

As a framework, CoI is a valuable tool by which educators can utilize to help guide their instructional design and

## ABOUT THE AUTHORS


### Haidee A. Jackson

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ensure that presence (i.e., social, cognitive, teaching) is established. Although we outlined ways to utilize the CoI framework within a particular LMS (i.e., Canvas), the CoI framework can equally be applied in other LMS and may be helpful to special education instructors when designing online learning environments conducive to social interactions for special educators to facilitate student engagement in learning. As the CoI framework is descriptive and not prescriptive, it is important that instructors maintain a sense of flexibility in adopting its use when designing equitable learning activities in online instruction. In support of equity, instructors should incorporate learning activities expressive of multiple points of view to support diversity and students' participation within online special educator preparation. Consideration of how to implement the CoI framework and establish social, cognitive, and teaching presence should always be linked to ensuring quality online learning experiences.

## REFERENCES


Allen, I. E., & Seaman, J. (2016). *Online report card: Tracking online education in the United States*. Babson Survey Research Group and Quahog Research Group. https://files.eric.ed.gov/fulltext/ED572777.pdf

AACTE. (2013). *The changing teacher preparation profession: A report from AACTE's professional education data system.* http://aacte.org/news-room/press-releases/aacte-releases-first-national-data-report-on-teacher-preparationprofession.html

Anderson, T. D., & Garrison, D. R. (1995). Critical thinking in distance education: Developing critical communities in an audio teleconference context. *Higher Education*, *29*(2), 183-199. https://doi.org/10.1007/BF01383838

Boe, E. E. (2014). Teacher demand, supply, and shortage in special education: A national perspective. In P. T. Sindelar, E. D. McCray, M. T. Brownell, & B. Lignugaris-Kraft (Eds.), *Handbook of research on special education teacher preparation* (pp. 67-93). Routledge.

Bradley, V. M. (2021). Learning management system (LMS) use with online instruction. *International Journal of Technology in Education, 4*(1), 68-92. https://doi.org/10.46328/ijte.36

Canvas. (n.d.). *How do I reply to an announcement as a student?* https://community.canvaslms.com/t5/Student-Guide/How-do-I-reply-to-an-announcement-as-a-student/ta-p/447

CAST. (2018). *Universal design for learning guidelines* (2.2). http://udlguidelines.cast.org

Clark, R. E. (1994). Media will never influence learning. *Educational Technology Research and Development*, *42*(2), 21-29. https://doi.org/10.1007/BF02299088

Cui, G., Lockee, B., & Meng, C. (2013). Building modern online social presence: A review of social presence theory and its instructional design implications for future trends. *Education and Information Technologies*, *18*, 661-685. https://doi.org/10.1007/s10639-012-9192-1

Dede, C. J. (1990). The evolution of distance learning: Technology-mediated interactive learning. *Journal of Research on Computing in Education, 22*(3), 247-264. https://doi.org/10.1080/08886504.1990.10781919

Dolan, J., Kain, K., Reilly, J., & Bansal, G. (2017). How do you build community and foster engagement in online courses? *New Directions for Teaching and Learning*, *2017*(151), 45-60. https://doi.org/10.1002/tl.20510

Dunlap, J. C. & Lowenthal, P. R. (2018). Online educators' recommendations for teaching online: Crowdsourcing in action. *Open Praxis, 10*(1), 79-89. https://doi.org/10.5944/openpraxis.10.1.721

Etherington, C. (2018, October 24). Why colleges and universities are adopting canvas. *Elearninginside.* https://news.elearninginside.com/why-colleges-and-universities-are-adopting-canvas/

Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, *10*(3), 157-172. https://doi.org/10.1016/j.iheduc.2007.04.001

Garrison, D. R., Anderson, T., & Archer, T. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105. https://doi.org/10.1016/S1096-7516(00)00016-6

Johnson, S. (2014). Applying the seven principles of good practice: Technology as a lever-in an online research course. *Journal of Interactive Online Learning*, *13*(2). 41-50. https://www.ncolr.org/jiol/issues/pdf/13.2.2.pdf

Lebow, D. (1993). Constructivist values for instructional systems design: Five principles toward a new mindset. *Educational Technology Research and Development, 41*(3), 4-16. https://doi.org/10.1007/BF02297354

Lowenthal, P., & Dunlap, J. (2018). Investigating students' perceptions of instructional strategies to establish social presence. *Distance Education, 39*(3), 281-298. https://doi.org/10.1080/01587919.2018.1476844

Lowenthal, P. R., & Parscal, T. (2008). Teaching presence online facilitates meaningful learning. *The Learning Curve, 3*(4), 1-2.

MacKnight, C. B. (2000). Teaching critical thinking through online discussions. *Educause Quarterly, 23*(4), 38-41. https://er.educause.edu/-/media/files/articles/2000/12/eqm0048.pdf

Mazzolini, M., & Maddison, S. (2007). When to jump in: The role of the instructor in online discussion forums. *Computers & Education, 49*(2), 193–213. https://doi.org/10.1016/j.compedu.2005.06.011

Paloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom.* Jossey-Bass.

PRNewswire. (2020, August 20). *13 States Partner with Canvas LMS to Support Educators, Students, and Parents.* PRNewsWire. https://www.prnewswire.com/news-releases/13-states-partner-with-canvas-lms-to-support-educators-students-and-parents-301115753.html

Richardson, J. C., Maeda, Y., Lv, J., & Caskurlu, S. (2017). Social presence in relation to students' satisfaction and learning in the online environment: A meta-analysis. *Computers in Human Behavior*, *71*, 402-417. https://doi.org/10.1016/j.chb.2017.02.001

Rovai, A. P. (2003). Strategies for grading online discussions: Effects on discussions and classroom community in Internet-based university courses. *Journal of Computing in Higher Education, 15*(1), 89–107. https://doi.org/10.1007/BF02940854

Rovai, A. P. (2007). Facilitating online discussions effectively. *The Internet and Higher Education*, *10*(1), 77-88. https://doi.org/10.1016/j.iheduc.2006.10.001

Rush, P. (2015). Isolation and connection: The experience of distance education. *International Journal of E-Learning & Distance Education Revue Internationale Du E-Learning Et La Formation à Distance*, *30*(2). https://www.ijede.ca/index.php/jde/article/view/936

Stephens, G. E., & Roberts, K. L. (2017). Facilitating collaboration in online groups. *Journal of Educators Online, 14*(1), 1-16. https://files.eric.ed.gov/fulltext/EJ1133614.pdf

Stewart, M. K. (2017). Communities of inquiry: A heuristic for designing and assessing interactive learning activities in technology-mediated FYC. *Computers and Composition, 45*, 67-84. https://doi.org/10.1016/j.compcom.2017.06.004

Trammell, B. A., & LaForge, C. (2017). Common challenges for instructors in large online courses: Strategies to mitigate student and instructor frustration. *Journal of Educators Online*, *14*(1), n1. https://files.eric.ed.gov/fulltext/EJ1133615.pdf

Watson, F. F., Bishop, M. C., & Ferdinand-James, D. (2017). Instructional strategies to help online students learn: Feedback from online students. *TechTrends, 61,* 420-427. https://doi.org/10.1007/s11528-017-0216-y