Teaching Presence in K-12 Blended Learning Classes under the Alternative Delivery Mode

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Abstract

Flexible learning options and blended learning programs continue to serve marginalized student populations under the Alternative Delivery Mode of the Philippine K-12 system. However, blended learning interactions in these programs remain hidden. This exploratory case study sought to capture the interactions and experiences in three blended learning classes through the elements of the Community of Inquiry (CoI) framework espoused by Garrison, Anderson, and Archer (2000). Qualitative data were gathered through interviews, focus group discussions, class observations, stored data, and field notes to investigate teacher and student blended learning interactions. An adapted version of the survey instrument based on the framework was also utilized to validate qualitative findings. Using content analysis and descriptive statistics, the study indicated strong teaching presence demonstrated through the roles and actions of K-12 teachers and students which lead to learning community building. Students manifested teaching presence through directing and regulating their learning. Areas for improvement which relate to teaching presence were also revealed, particularly in the communication and the timeliness of feedback, and online facilitation of discourse. This study justifies the CoI as a practical framework to understand and guide teaching and learning in K-12 blended learning programs. To highlight the role of teachers in learning community building, a CoI framework for the K-12 and a self-reflection tool for teachers are being proposed. Changes to the categories and indicators of the presences are recommended to further affirm the framework's applicability in the K-12 setting.

Keywords: *teaching presence, Community of Inquiry framework, K-12 blended learning, alternative delivery mode, e-learning Philippines*

Introduction

Within the K-12 education system of the Philippines, programs under the Alternative Delivery Mode (ADM) have been implemented to: (1) target potential school leavers; (2) minimize youth dropouts; and, (3) provide access to other students in unusual circumstances (DepEd Order No. 54 s.12, Phils). Case studies on ADM revealed that a limited number of schools become involved in genuine blended learning (BL) (Seameo-Innotech, 2015) where there has been a recent call for improvement of teacher's skills and pedagogies for self-directed learning (Seameo-Innotech, 2019) and BL engagement and assessment (Flor & Flor, 2017), and through the professional development of teachers on BL (Archambualt & Dalal, 2020; Hathaway & Mehdi, 2020; Tovine et al., 2019). The importance of instructor role and expertise, teacher presence, and teacher-learner interactions in BL have been highlighted in research (Ma et al., 2015; Hathaway & Mehdi, 2020; Richardson et al., 2015). These studies, however, were mostly done in higher education contexts abroad where BL has gained acceptability (Bonk & Graham, 2012). If K-12 BL programs are to thrive in contexts such as the Philippines where barriers and challenges to ICT integration exist (Aguinaldo, 2013; Kubota et al., 2018), these must draw from research-based practices and frameworks to ensure

sound pedagogies beyond the acquisition of ICT skills (Arinto, 2016). As such, this study examined BL interactions through the Community of Inquiry (CoI), a longstanding framework validated in higher education to examine educational experiences in computer-mediated instruction and online learning environments. Through an exploratory case study, this research applied the elements of the CoI, one of which is teaching presence. Investigated experiences, and outcomes of BL classes situated within programs under the ADM.

This article discusses findings and results in relation to the study's research sub-questions: "How is teaching presence manifested in the K-12 BL classes? In what ways do these interactions reveal learning communities as outcomes of BL?". It describes the manifestations of teaching presence and analyzes ways these indicate learning communities as outcomes of BL. Recommendations on future practice and research on K-12 BL grounded on the CoI are proposed given that in the Philippines, schools have shifted to remote learning and fully online learning during the pandemic. The next section discusses the literature on teaching presence.

Teaching Presence of the CoI framework

This study posits that K-12 BL experiences may be further understood through the CoI framework by Garrison et al. (2000). Social interactions and critical discourse are made possible within the CoI through the interplay of the three elements or presences deemed necessary for a fruitful online community of learning to take place (Arbaugh et al., 2010). These elements are teaching presence (TP), cognitive presence (CP), and social presence (SP) as seen in Figure 1. Within constructivist learning communities in higher education, varied instructor roles are fulfilled, and these are characterized and examined through the element of TP. TP is believed to play a vital role in maintaining the balance and function of the other elements of the framework in achieving desired learning outcomes (Garrison & Anderson, 2003; Garrison & Cleveland-Innes, 2005).

Figure 1

The Community of Inquiry framework
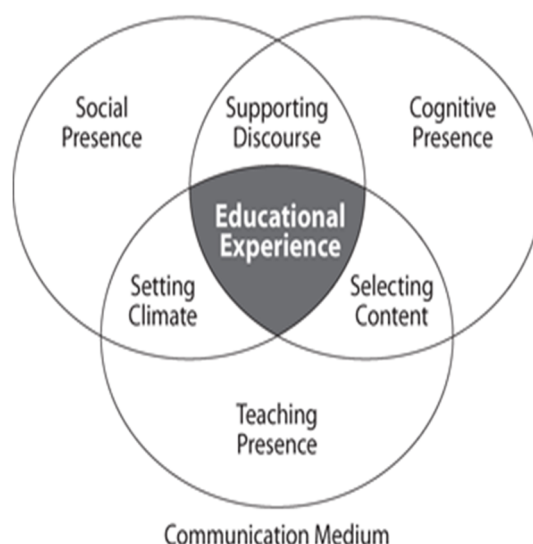
Note. From the "CoI Framework" by D. R. Garrison, T. Anderson, and W. Archer, 2000, (https://coi.athabascau.ca/coi-model/). In the public domain.

Under TP are categories and indicators validated in empirical studies that measure the quality of educational experiences and collaboration. These are seen in Table 1 below:

Table 1

Community of Inquiry: Categories and Indicators

Elements	Categories	Indicators
Teaching Presence	Design & Organization Facilitating Discourse Direct Instruction	• Setting Curriculum & Methods • Shaping Constructive Exchange • Focusing and Resolving Issues
Social Presence	Open Communication Group Cohesion Personal/Affective Expression	• Learning Climate/Risk-Free Expression • Group Identity/ Collaboration • Self-Projection/ Expressing Emotions
Cognitive Presence	Triggering Event Exploration Integration Resolution	• Sense of Puzzlement • Information Exchange • Connecting Ideas • Applying New Ideas

Note. Adapted from "Researching the community of inquiry framework: Review, issues, and future direction" by D.R. Garrison and J.B. Arbaugh, 2007, *Internet and Higher Education, 10*(3), p.159. (https://doi.org/10.1016/j.iheduc.2007.04.001). Copyright 2007. Adapted with permission from Elsevier.

TP is described as an amalgam of instructor roles in learning communities that must be fulfilled to ensure effective and successful learning. The increasing role of TP in the direction of cognitive and social processes within BL communities in higher education has been emphasized (Vaughan et al., 2013). Studies have shown TP as definitely having a positive influence on both these two presences, (Garrison et al., 2010; Szeto, 2015; Feng et al., 2017) to include student's sense of classroom community (Shea et al., 2006).

However, studies have questioned whether TP, with its categories and indicators and corresponding CoI survey items, sufficiently account for the distribution of teaching roles and actions which members of the learning community take on (Dempsey & Zhang, 2019; Shea et al., 2014). In particular, learning presence was proposed as an additional element (Shea et al., 2012) inclusive of student roles set apart from the teacher (Blaine, 2019) with behaviors considered as co-regulation and shared regulation (Hayes et al., 2015). Co-regulation is a supportive behavior from a skilled or capable member toward fellow learners in need, usually demonstrated through social interactions amidst working on tasks (Hadwin et al., 2011). However, Garrison (2017) asserted that within the CoI framework, the construct of TP was applicable to both teachers and students, especially within a constructivist learning community. What these studies in higher education emphasize is that the pedagogies coupled with the tools for learning determine to some extent the kind of TP manifested in these learning environments. This study intends to investigate manifestations of TP, including its interaction with the other presences within emerging BL programs to ascertain the framework's applicability at the K-12. The results will potentially inform the professional development of teachers who are currently experiencing the new normal of online and distance e-learning during this pandemic.

Methodology

A research methodology was undertaken which allowed for varied data collection from three BL classes, situated in three urban public schools with programs under the ADM and supervised by the City Schools Division Office of the Department of Education. These schools either offer an e-Learning Program or an Open High School program (OHSP). These BL classes were treated as one single case in an exploratory case study design. The findings uncovered facets of the BL programs based on data gathered from a sample size ranging from 24 to 40 students and five teachers as indicated in Table 2, from which descriptive statistics and content analysis were generated.

Table 2

Summary of Case Profile: BL Classes

BL Class Population	DepEd Program	Number of Student Participants Total N ≤ 40	Number of Teacher Participants Total N=5
One Grade 10 Class from School A (36 students)	OHSP in a public high school	N ≤ 7	1
One Grade 7 Class from School B (36 students)	e-Learning Program in a public high school	N ≤ 18	2
One Grade 10 Class from School C (29 students)	eLearning Program in a public science high school	N ≤ 15	2

Note. Data compiled by the researcher

Student focus group discussions (FGD) (N=8 groups, 29 students) and teacher interviews (N=5 teachers) were undertaken. Participants were asked open-ended questions to describe their interactions and experiences within their BL classes. To gain a general view of the presences as well as detailed descriptions, students were asked to complete the CoI Survey Part 1 (Likert type scale, N=40 students) adapted from the CoI Survey by Arbaugh et al. (2008) and the CoI Survey Part 2 (open-ended questions, N=24 students). A bilingual version of the survey was developed by the researcher for use among students who use Filipino or Tagalog and English languages in school to communicate and learn. Teacher interview questions were also aligned with the open-ended questions for students. In addition, three face-to-face classroom observations were completed to validate further the participant responses. The interpretation of stored data from virtual class interactions was also included, drawn from the school-administered Learning Management System and teacher or student-managed group chats over at FB Messenger.

The study involved a close examination of participant experiences through the coding protocols based on the categories and indicators of the CoI by Anderson et al. (2001) in prior research. These also guided the collection, analysis, and interpretation of varied data. Through constant comparison analysis, the study undertook a systematic process of coding to examine layers of meanings in the textual data and narratives (Leech & Onwuegbuzie, 2008) nested in the BL class interactions and which relate to the research questions.

Ethical Considerations

This article is based on the author's dissertation undertaken in accordance with the ethical standards and guidelines of the USQ Human Research Ethics Committee, with approval ID H18REA165. Permission to undertake the study was sought from the respective school district local government office and the school principals. Informed consent from all participants in the study was obtained.

Findings on Teaching Presence

Students across class groups have generally positive responses about the TP in their BL classes. This may be largely attributed to students experiencing their teachers as instructors responsible for subject content and learning activities. Students felt that the teacher participants in the study demonstrated teaching skill and support through the detailed learning activities. The online posting of complete lessons with the deadlines provided structure and focus to their work, as one Grade 7 student indicated "we learn to make sure that all lessons asked of us get done, either individually or in groups." Students mentioned that they can approach their teachers anytime for questions or clarifications, even to help resolve issues, as a Grade 10 student stated that "we have an open forum during homeroom period time if there are conflicts which need to be fixed immediately."

TP was also interpreted by students through the teacher's use of technology in relation to their subject-related concerns on communication and time management. For example, a few Grade 7 students from School B remarked that at times they felt confused "when there will be classes in school or not," despite announcements being posted on the school's website. Some students in School C also noticed that "there can be miscommunications with teachers because sometimes, we have a hard time accessing the platform due to bugs and updates". These Grade 10 students sensed that not all teachers seem to be proficient with technology and thus were perceived as less present when online. A few students noted that some teachers did not seem to be trained in the use of the LMS or know how to use other applications for educational purposes, comparing them to the active teachers who were participants in the study.

Results of the CoI Survey Part 1 (N=40 students), further lend support to the above manifestations of TP given the significantly high scores across the TP items. Mean ratings were generated through SPSS to determine whether the survey results supported the findings gathered through student responses to the FGD. Table 3 presents mean ratings across all items of TP. All items received a maximum rating of 5 with varied minimum ratings ranging from 1 to 3 (strongly disagree to neutral or no opinion). The results indicated most ratings as skewed left, represented by the standard deviation.

Table 3

Descriptive Statistics of TP Items from the CoI Survey Part 1

TP Category	TP Survey Item	Mean	Std. Deviation
Design and Organization	TP1 clearly communicated important subject topics	4.18	0.931
	TP2 clearly communicated important subject goals	4.18	0.874
	TP3 provided clear instructions	4.15	0.700
	TP4 clearly communicated important due dates	4.25	0.899
Facilitating Discourse	TP5 helpful in identifying areas of disagreement	3.95	0.815
	TP6 guiding the class towards understanding topics	4.30	0.823
	TP7 helped keep the class engaged	4.03	0.800
	TP8 helped keep the class on task	4.10	0.744
	TP9 encouraged the class to explore new ideas	3.85	0.864
	TP10 reinforced the development of a sense of community	4.02	1.025
Direct Instruction	TP11 helped to focus the discussion	4.10	0.672
	TP12 provided feedback that helped understand strengths	3.90	0.955
	TP13 provided feedback in a timely fashion	3.57	0.958

Note. SPSS Data Analysis collated by the researcher

Items TP1-TP4 under the Design and Organization category received relatively even scores. Items pertaining to Facilitating Discourse in the CoI Survey Part 1 likewise showed positive results, having a mean average of 4.04 and with TP6 garnering the highest mean rating of 4.30 among all TP items. This item particularly describes ways teachers manifest facilitation as indicated by the survey. Item TP10, 'Teacher actions reinforced the development of a sense of community among students in class' received positive ratings for 30 out of 40 responses (combined agree and strongly disagree) but with eight responses indicated as neutral or no opinion. The neutral/no opinion ratings possibly meant students either did not understand the item, had no basis to decide or may be too polite to give a negative rating. Also, the term "sense of community" could have been difficult to concretize. For the category of Direct Instruction, the students offered positive ratings to the quality of feedback as seen in Item TP12. Whereas Item TP13 pertaining to the timely feedback received the lowest mean rating at 3.57 among all the survey items. Hence, the timeliness of feedback may be an area of concern for some students.

The researcher noticed that TP which arose from roles or actions coming from students were rarely reflected through the TP items of the CoI survey. Most items under TP were framed from the point of view of the student rating the presence of their teachers and not necessarily themselves as facilitators or as peer-teachers. It was observed that in the CoI Survey, 12 out of 13 items started as "The teacher", which was listed as the most frequent word used in the instrument. These show TP as roles actively taken by the teacher which are to be rated by students. As such, the study found it valuable to examine further manifestations of TP through class observations and virtual stored data made available, as described in the next paragraphs.

Data was gathered through face-to-face class observations with three subject teachers, one in each school, through an observation template developed by the researcher. Along with the field

notes and virtual classroom stored data, these served to triangulate with responses collected through the instruments identified. The TP manifested by teachers was evident in face-to-face class observations as indicated in Table 4, which reinforces the findings from the descriptive statistics presented early in this section. More so, support for student TP emerged as unique findings in this study undertaken among K-12 students.

Table 4

Coding Summary for Face-to-Face Class Observations and Virtual Classroom Stored Data

Teaching Presence Categories	Coding Frequency from Face-to-Face Classes	Coding Frequency from Stored Data	Coding Frequency of Student TP
Design and Organization	17	14	4
Direct Instruction	18	10	2
Facilitating Discourse	35	2	5

Note. Analysis from NVivo files collated by the researcher

As seen in Table 4 above, Facilitating Discourse is most frequently demonstrated by teachers during face-to-face sessions. The coding count for facilitating discourse is 35 for face-to-face sessions while that of online classes is two. The coding frequency revealed indicators of facilitation through which students perceive TP and these are: setting the climate for learning, drawing participants and prompting discussion, acknowledging, encouraginsg, reinforcing student contributions, and seeking to reach consensus and understanding.

The other categories of TP received less than half the number of frequencies but were spread evenly across direct instruction and design and organization. All indicators of TP across the two categories were found to be present, with all categories indicating TP as demonstrated by students. These are: utilizing media effectively (Design and Organization), confirming understanding through assessment and explanatory feedback (Direct Instruction).

Within the category of Design and Organization and Facilitating Discourse are specific indicators of setting curriculum, methods, and shaping constructive exchange. Data from both teachers and students described how this transpired in their interactions. The ways students searched and selected additional information to help themselves learn have also been described. Moreover, students and teachers mentioned terms such as group work, group chats, "groupings" or "working in their squads" while describing cooperative learning where ongoing discussions happened. These were either planned by teachers when meeting face-to-face or naturally executed by students when online. Thus, these allude to the interaction of TP with SP and CP.

Thus far, the findings presented in this section showed evidence of TP manifested as roles and behaviors primarily carried out by the teachers. Overall, these support teacher participant descriptions of their actions to engage learning and participation within their BL classes. Interestingly, findings also surfaced TP as driven by students. This was reported to take place during online group work and collaborative learning. A Grade 10 student revealed, "when one sees a classmate not being able to understand, another classmate will teach." Findings thus far point to a possible interaction of TP with the other elements of the CoI at the K-12 setting. The next section elaborates on the analysis of these findings.

The Manifestations of Teaching Presence in K-12 BL Classes

This study argued that the manifestations of TP highlight the important roles of both teachers and students in their BL experiences. Overall, findings on manifestations of TP among K-12 teachers and students aligned with research on TP in higher education. Studies have looked deeply into instructor roles within higher education blended and online learning communities (Sheridan & Kelly, 2010). The caring and support received by students in this study affirmed the student support processes that are provided by tutors in higher education (Feng et al., 2017). This is also consistent with the indicators of rapport in which distance education teachers find valuable to implement while working with high school students (Murphy & Rodríguez-Manzanares, 2012). In this K-12 study, the fulfillment of these roles has been manifested across the TP categories and through its interaction with SP and CP as discussed in the next sections.

Design and Organization

Within the K-12 setting, the responsibility for the design and organization of blended learning is the remit of the teachers. Teachers in the study clearly see this as their role, which students also expect of them. Design of instruction was observed to be of value among higher education students, mainly because it contributed to student satisfaction in blended and online learning environments (Shea et al., 2003; Wise et al., 2004). Setting curriculum, methods, and parameters as indicators of Design and Organization, were observed consistently in online and face-to-face sessions. This was mostly manifested by teachers with consistent results across all schools. For students, TP meant that they were able to rely on their teachers to provide structure to their daily lessons, tasks, and targets.

Facilitating Discourse

TP through facilitating discourse is meant to engage interaction, dialogue, and thinking among community members in higher education research. These are grounded on values of respect, trust, and equality (Liu et al., 2007; Vesely et al., 2007; Zhao et al.,2012). This category was manifested quite consistently whether online or face-to-face in this study, hence was found to be a strength of the teacher participants, most of whom were language teachers with additional responsibilities as homeroom advisers.

Findings showed how the teachers of School A and School C maximized the FB Messenger for language learning. To guide student discussion when online, the English teacher posted polls and questions on controversial issues or current events. A group of Grade 10 students appreciated being given the time to compose their thoughts before sharing or taking note of others' posts before responding, stating that "we also learn how to write, learn to speak in English even if our grammar is incorrect; we learn from the corrections and we learn it for our own sake, even if it's hard." Thus, students sensed they acquired and developed English language skills through the teacher's shaping of constructive exchange in their BL classes.

Hence, facilitating discourse as manifested at the K-12 level means that teachers explicitly communicate ways to make students comfortable with self-expression. These, in turn, foster interaction which demonstrates that their ideas and responses are welcomed by both peers and teachers (Lewis & Abdul-Hamid, 2006; Villanueva, 2013). Teachers and students alike have been found to facilitate discourse by prompting student contributions.

Direct Instruction

Focusing and resolving issues as an indicator of direct instruction was evident but mostly during face-to-face class sessions. Resolving issues related to conflict and student behavior remain to be delegated to the teacher as relayed by both students and teachers of Schools A and B. Through homeroom teaching responsibilities, teachers asserted their presence to both parents and students. Teachers attested to contacting parents of selected students for specific academic and student life concerns; also taking time to provide feedback during parent-teacher conferences. Students viewed these as part of the guidance they receive from their teachers. A possible explanation for this is the established role of supervising adults in the K-12 system, more so, in the Philippine public-school setting because Filipino students are expected to respect their elders. Accepting the authority of the teacher and supervising adults to resolve such matters is deemed to be a sign of respect, reciprocity, or compliance to rules. These qualities characterize learning communities in higher education research (Brown, 2001; Reilly, 2014; Vesely et al., 2007) where members demonstrate trust and mutual respect as important ingredients in community development and maintenance (Peck, 2010).

Interactions of TP with SP and CP

The study highlighted the teaching behaviors of online instructors when it comes to supporting adolescent learners, some of whom have learning difficulties that contribute positively to the learning environment by being caring and receptive as discussed by Ma et al. (2015). In this study, teachers of the OHSP provide support and guidance which was likewise observed by Velasquez et al. (2013). The homeroom teachers in this study were found to manifest TP through immediacy behaviors, especially with the choice of using FB Messenger. However, immediacy behaviors were observed as forms of SP in higher education settings which are aimed at closing the transactional distance among instructors and their students (Arbaugh, 2001; Garrison et al., 1999). In this study, immediacy behaviors took the form of private messages as evidence of teachers intentionally getting connected with students in need of support, to offer remedial sessions or extended deadlines to those students who need it due to learning difficulties. These are indicative of the interaction of TP and SP, an area this study was able to reveal in the context of K-12 teachers and students.

Co-regulation is an area of contention in CoI research (Garrison, 2017; Garrison & Akyol, 2013), defined by Hadwin et al. (2011) as "consisting of emergent interactions which temporarily mediate regulatory work (strategies, evaluating, goal setting, evaluation, and motivation)" (p.68–69). This study affirmed that co-regulation, as a manifestation of TP, is meant to direct members of the learning community towards attaining learning goals. In the case of School B, class observations revealed how selected students manifested resolving work or task-related issues while engaged in cooperative learning or group work. The same was indicated by School C students who often engaged in small-group collaborative work. Without having the need for the teacher to facilitate nor moderate online communications by FB Messenger, the Grade 10 students managed to settle their differences, concerns, and other issues in order to get needed work accomplished. These online collaborations help themselves and their peers as a way to attain shared goals of learning, leading to a sense of community felt with each other (Rovai & Jordan, 2004) indicative of learning communities. This affirms the correlation of collaborative learning and a sense of community at the K-12 which have been established in recent higher education research by Chatterjee and Correia (2020).

Within a community of inquiry, TP was revealed through the distribution of teaching responsibilities among learning community members, and thus not solely with the instructor (Garrison, 2017). When learning with peers, the TP was demonstrated as peer-facilitation of cognitive presence which according to Chen et al. (2019) includes providing information, asking factual and explanatory questions, giving clarifications, and using social cues. In this study, TP was fulfilled by students and this meant working independently while interacting with content when online. When placed in a position to navigate their learning, self-directed students take responsibility for the monitoring and management of learning tasks and processes (Garrison, 1997; Pilling-Cormick & Garrison, 2007). In this study, students managed their tasks and facilitated their learning in the process of understanding content delivered online. These concrete actions likewise indicated a form of self-direction. Through self-direction, learners demonstrate psychological control of their learning as they exercise their free will to learn (Jézégou, 2012).

Learning Community Building through Teaching Presence

Specific manifestations of TP by K-12 teachers and learners in this study indicated processes of learning community building found in higher education research. These processes pertain to the establishment of boundaries, rules and guiding principles (Palloff & Pratt, 2005; Vesely et al., 2007) grounded on good communication (Peck, 2010) and equality (Manalili, 2013). However, among K-12 learners, actions are observed to be more implicit, meaning these are closely tied with a shared goal of having a group output while keeping harmonious ties and communication with peers. The timely communications are welcomed by students with shared values for accountability, time management, responsibility, and skills improvement through outputs and timelines.

This study indicated the importance of scaffolds such as timeliness of feedback and other communications with K-12 students who need clarity and consistency to carry out expected work. Students felt that this was part of creating the structure that they needed to help themselves manage their time or regulate their learning as members of blended and online learning communities (Hayes et al., 2015). Dialogue and communication are also of the utmost importance among learning community members (Reilly, 2014) manifested through the communication of direct feedback and assessment and are likened to instructor immediacy behaviors which higher education students find important (Sheridan & Kelly, 2010).

In higher education research into TP, Shea (2006) found that instructors were directly responsible for building a sense of community through indicators of facilitation and direct instruction. Teachers in this study however expressed that the cooperative and collaborative learning strategies were designed to parallel their face-to-face class interactions. Whether these were intended to explicitly build a learning community was not verbalized. In this sense, teachers may still be unaware of their potential role in learning community building through the manifestations of TP in different ways. Hence, the importance of immediacy behaviors, clear communications, student support, learning community building, and other manifestations of TP that students find important serve as inputs for the professional development of teachers towards the creation of quality TP and learning community building.

Thus far, this article affirmed prior recommendations in research for the professional development of teachers on BL course design, pedagogies, and use of technology (Deutsch, 2010; Jokinen & Mikkonen, 2013). More important is the application of the CoI at the K-12 to frame blended learning community building, teaching practices, and professional development. To further guide the development of K-12 blended learning communities, this study proposes this framework in

Figure 2. Specific to contexts where BL and other flexible learning options are emerging in settings where constructivist teaching has not been quite explicit, or where traditional teaching remains as a dominant practice, this study suggests the CoI framework of the K-12 Learning Community. The said framework is foreseen to guide BL delivery and instruction, not only in terms of academic learning targets but also to highlight BL as an experience of learning community building among K-12 teachers and students.

Figure 2

The CoI Framework for K-12 Learning Community Building by Villanueva (2020)
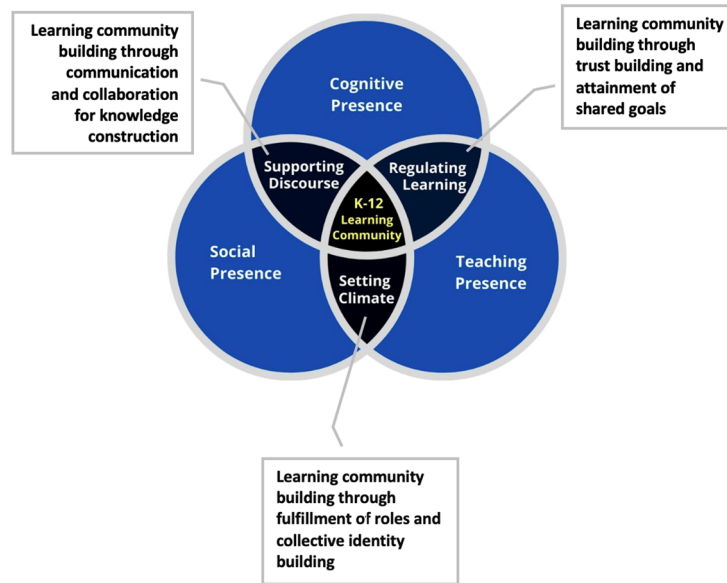
Note. Adapted from the "CoI Framework" by D. R. Garrison, T. Anderson, and W. Archer, 2000, (https://coi.athabascau.ca/coi-model/). In the public domain.

With the above, changes to the categories and indicators of the CoI (see Appendix A) are also suggested. For the element of TP, this study proposes an additional category referred to as Self-direction and with the corresponding indicators, monitoring/knowledge of cognition, and strategy use. With this proposed modification, suggested items for inclusion in the CoI survey are presented. This study suggests that items from the Shared Metacognition Questionnaire of Garrison and Akyol (2015) be accommodated within the CoI survey instrument for use among K-12 students, examples of which are displayed in Table 5:

Table 5

Additional CoI Survey Items under the Proposed TP category: Self-direction

Items added to the K-12 CoI Survey from the Shared Metacognition Questionnaire by Garrison and Akyol (2015)	**Suggested Indicators** Shea et al. (2012) and Nota et al. (2004)
I am aware of my existing knowledge.	Knowledge of cognition
I assess my understanding.	Monitoring of cognition
I make judgments of the difficulty of the problem.	Strategy use
I change my strategy when I need to.	Strategy use

Note. Adapted from "Investigating Experiences and Outcomes of K-12 Blended Learning Classes through the Community of Inquiry Framework" (p.268), by J.A.R. Villanueva, 2020 (https://eprints.usq.edu.au/40350/).

These proposed modifications of the TP items are based on findings that correspond to the Shared Metacognition construct discussed by Garrison and Akyol (2015) and prior research on self-direction by Garrison (1997). The corresponding indicators for TP in Table 5 are from the learning presence construct proposed by Shea et al. (2012) and the components of self-regulation as reported by Nota et al. (2004). Along with these are modifications to the other CoI categories, indicators, and survey items based on the studies by Redmond (2014) on reflection and by Lowenthal and Dunlap (2014) on the social presence (see Appendix A and B). Hence, these suggestions are still consistent with the framework's three presences validated in higher education research which this study has found to be applicable at the K-12 setting.

Moreover, this study seeks to contribute another practical application of the CoI framework through a proposed CoI Self Reflection Tool for K-12 Teachers. The next section justifies this further.

A Proposed CoI Self-reflection Tool for Teachers

This study found that learning communities were outcomes of the BL interactions. However, whether teachers see themselves and their experiences as indicative of them being part of the learning community was not explicitly revealed. The research only applied the CoI survey instrument to the students as an added measure to support the findings. The survey was not designed for teachers to use as a mirror for their contribution to the learning community-building process. Though the dynamics of teacher-student relationships have a bearing on this, this study finds sense in proposing the CoI survey instrument as a basis for a K-12 CoI Self-Reflection Tool for teachers (see Appendix B). The proposed tool also includes a section of open-ended questions, emphasizing the role of the teachers as partakers of the learning community and active members of the teaching team. In-service teacher training activities can potentially accommodate the use of this tool for self and collaborative reflection on their remote, blended, or fully online class teaching experiences during this pandemic to engage action planning for the development of teaching presence and learning community building. This is justified capitalizing on this study's practical contribution through a recommended CoI framework for K-12 learning community building depicted in Figure 2, applicable in contexts where BL and other flexible learning options are emerging as viable solutions and with conditions supportive of these.

Conclusion

This article sought to discuss findings on the ways teachers and students manifested TP in their BL classes. The discussion brought to light distinct manifestations of TP in the categories of design and organization and for facilitating discourse. It provided evidence of the roles and actions K-12 teachers and students perform, manifested as TP which lead to learning community building through their BL interactions. Specifically, these are through establishing guidelines or ground rules, boundaries, and shared values which are indicative of learning communities in higher education online learning (Brown, 2001; Shea, 2006; Vesely et al., 2007). Additionally, this article revealed manifestations of TP by students in the K-12 setting within indicators of facilitating discourse and direct instruction. These indicated a shift in the roles for managing and regulating learning as performed by students when online. This was evident because students were given more control of their own learning and in supporting others.

Areas for improvement related to TP were also discussed, particularly in the communication and the timeliness of feedback, and online facilitation of discourse afforded by the choice of media

and use of technology. The study affirmed the role of TP in learning community building reported in higher education research, which is also found to be valid among K-12 teachers and students. Likewise, it revealed that through the CoI framework, TP may be further understood in the context of K-12 learning, namely strategies for building trust, mutual respect, and self-regulation, aspects crucial to adolescent learners.

Recommendations

This research applied the CoI, a Western-based framework, but with a bilingual survey instrument, an initial step for future studies to ascertain the wider application of the CoI in the Philippine K-12 system and its suitability in Southeast Asian culture and context. More importantly, the study provided evidence of the role of TP within the CoI framework and also in relation to the other presences leading to learning community building as outcomes of K-12 BL.

While the study found the TP categories and indicators as valid in the context of the K-12, it also revealed limitations in the CoI Survey instrument as a measure of TP. Suggested modifications to the TP categories and indicators with corresponding survey items for the K-12 have been proposed and further research must be undertaken in order to reflect TP as both fulfilled by teachers and students. With these modifications is a call to reconsider changes in the categories and indicators of TP and that of SP and CP which this study also included. These changes will allow for the CoI Framework for K-12 Learning Community Building suggested in this study to be utilized in contexts where BL program models are still emerging and where learning community building may be introduced as an essential part of BL pedagogy and practice.

The CoI framework as a focal point to guide teacher training on course design, pedagogy, and learning community building has been highlighted as a concrete contribution of this study. The CoI Self Reflection Tool for Teachers has been proposed for inclusion in teacher preparation endeavors for BL in schools. Possibilities for the use of this CoI tool are being proposed for use in the school-based professional development of teachers, whether in BL environments or technology-enabled classrooms, and likewise in preparation for a school-wide BL implementation.

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Appendix A

Proposed Changes by Villanueva (2020) to the Community of Inquiry Categories and Indicators

CoI Element	Categories	Indicators
Teaching Presence	» Design and Organization » Facilitating Discourse » Direct Instruction » **Self-direction**	• Setting curriculum & methods • Shaping constructive exchange • Focusing and resolving issues • **Monitoring/Knowledge of cognition** • **Strategy use**
Social Presence	» Affective Expression » Interactive Communication » Group Cohesion » **Shared Regulation**	• Self-projection/ • Expressing emotions • Learning climate/ • Risk-free expression • Group identity • **Cooperation and collaboration**
Cognitive Presence*	» **Self- and Co-regulation** » **Reflection** » **Critical Thinking and Dialogue**	• **Monitoring/ Managing cognition** • **Reflecting on content/learning process** • *Sense of puzzlement* • *Information exchange* • *Connecting ideas* • *Applying new ideas*

Note. Adapted from "Researching the community of inquiry framework: Review, issues, and future direction" by D.R. Garrison and J.B. Arbaugh, 2007, *Internet and Higher Education, 10*(3), 159 (https://doi.org/10.1016/j.iheduc.2007.04.001). Copyright 2007. Adapted with permission from Elsevier.

Categories of CP, namely Triggering event, Exploration, Integration and Resolution were removed but its indicators, in italics, have been maintained.

Appendix B

K-12 CoI Self-Reflection Tool for Teachers by Villanueva (2020)

I. Kindly rate your actions/ behavior as a teacher of a blended learning class.
Refer to the scale below. Mark the space which corresponds to your self-rating.

     1 = Strongly disagree
     2 = Disagree
     3 = Neutral
     4 = Agree
     5 = Strongly agree

Teaching Presence	1	2	3	4	5
Design and organization					
1. I clearly communicate important subject goals or content/topics to my students.					
2. I provide clear instructions on how to participate in learning activities.					
3. I clearly communicate important due dates/time frames for learning activities.					

Teaching Presence	1	2	3	4	5
Facilitation					
4. I am helpful in identifying areas of agreement and disagreement on content/topics that help my students learn.					
5. I guide the class towards understanding topics in a way that helps them clarify their thinking.					
6. I keep the class engaged and on task in a way that helps us learn.					
7. I make an effort to develop a sense of community among students in the class.					
Direct instruction					
8. I help to focus the discussion on relevant issues in a way that helps my students learn.					
9. I provide feedback that helps my students understand their strengths and weaknesses in relation to the subject's goals and objectives.					
10. I provide feedback to my students in a timely fashion.					
Self-direction +					
11. I help my students to be aware of their existing knowledge					
12. I provide opportunities for students to assess their understanding					
13. I encourage my students to make judgments on the difficulty of the problem they encounter.					
14. I encourage my students to change their strategy when they need to.					

Reminder:
1 = Strongly disagree   2 = Disagree   3 = Neutral   4 = Agree   5 = Strongly agree

Social Presence	1	2	3	4	5
Affective expression					
15. I can form distinct impressions of some of my students.					
16. I am comfortable expressing my emotions with my students through online or web-based communication.					
17. I can trust my students' expressions and other communications while interacting online.					
Interactive communication					
18. I feel comfortable conversing with my students through online platforms such as FB/ LMS/ chat groups.					
19. I feel comfortable engaging in the online discussions as a way to build rapport or provide support to my students.					
20. I see our disagreements as part of communicating or interacting while teaching and learning with my students.					
Group cohesion					
21. Getting to know other students through this class gives me a sense of belonging.					
22. I feel comfortable with my students disagreeing while still maintaining a sense of trust in their process.					
23. I feel a sense of connectedness with my class/ students.					
Shared regulation +					
24. I encourage my students to listen to each other's ideas or points of view.					

Social Presence	1	2	3	4	5
Shared regulation +					
25. I encourage my students to consider each other's feedback and contributions.					
26. I find ways for students to help each other learn.					
27. I allow students to monitor each other's behavior while learning.					

Reminder:
1 = Strongly disagree   2 = Disagree   3 = Neutral   4 = Agree   5 = Strongly agree

Cognitive Presence	1	2	3	4	5
Self- and Co-regulation +					
28. My students are encouraged to be aware of their effort and motivation.					
29. Opportunities are provided to my students to assess how they approach the problem.					
30. My students are allowed to look for confirmation of their understanding from others.					
31. My students are encouraged to challenge the perspectives of others, including mine.					
Reflection +					
32. I encourage my students to reflect upon the comments of others.					
33. I encourage my students to reflect on the content and discussion to help them understand concepts in the subject.					
Critical thinking and dialogue					
34. My students' curiosities are engaged with online learning activities.					
35. Opportunities are provided for brainstorming and finding relevant information which helps my students resolve content related questions.					
36. New concepts are sufficiently explored by my students in this subject.					
37. Group interactions and discussions in class are valuable in helping my students to appreciate different perspectives.					
38. My students are allowed to combine new information to help them answer questions raised in the class activities.					
39. The learning activities in class help my students construct explanations or solutions.					
40. My students will be able to apply the knowledge created in this subject to their other subjects/ classes or other related activities in school.					

II. Kindly reflect and respond to the questions as best as you can.

1) What do I like best about my teaching experiences in my blended learning classes?

2) Which areas do I need to work on to improve teaching and learning in my blended learning classes?

3) In what ways do I feel/sense that my students and I are part of a learning com-munity? What else can I do to build our learning community?

4) Which teacher training topics/content will I be interested in learning about to help improve my blended learning experiences?

5) Which teacher training topics/content will I be interested in sharing about to help improve a fellow teacher's blended learning experiences?

6) Describe ways the school leadership team can help develop or enrich our blended learning experiences.

Note. Adapted from *"The CoI Survey"* by B. Arbaugh. M. Cleveland, S.R. Diaz, D.R. Garrison, P. Ice, J. Richardson, P. Shea and K.P. Swan, 2008. (https://coi.athabascau.ca/coi-model/coi-survey/).CC-BY-SA.

+Items under these categories adapted from "Toward the development of a metacognition construct for communities of inquiry" by D.R, Garrison and Z., Akyol, 2015, *The Internet and Higher Education*, 24, p.69. (https://doi.org/10.1016/j.iheduc.2014.10.001). Copyright 2015. Adapted with permission from Elsevier.