



Teaching Presence in an Instant Messaging (IM) Community of Inquiry (COI): Telegram as a Virtual Learning Environment (VLE)

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INTRODUCTION

Telegram is a cloud-based instant messaging (IM) platform with a monthly active user base of over 500 million people (Karimpour et al., 2021). Telegram is significantly more multi-platform friendly than other chat applications like WhatsApp since it allows users to use the same account simultaneously on any device, including phones, tablets, and laptops using a simple security check through code verification. All Telegram content,

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including images, documents, links as well as text, voice and video messages are stored in a secured cloud server, and requires less data and storage than its competitors (Sai Prasanthi et al., 2022).

This chapter offers a collaborative autoethnographic reflection of using Telegram as a virtual learning environment (VLE). Drawn together by our mutual interests in the teaching and learning (T&L) affordances of IM, the two authors collaborated to write this chapter. In writing this chapter together and learning more about Telegram, we ourselves became a dyadic mini community of inquiry (CoI). While the chapter is based on the first author's reflections of teaching via Telegram, the second author played a major role providing background and context on Telegram as an instant messaging platform, reviewing and interpreting relevant literature, offering insights to the first author's autoethnographic reflections.

When COVID-19 lockdowns in 2020 forced educational institutions and teachers to abandon their lecture halls and shift their classes online, instead of the video conferencing platforms used by most, the first author (thereafter referred to in the first person) turned to instant messaging via Telegram. Telegram emerged as a natural solution to facilitate my teaching delivery. My decision to turn to Telegram was motivated by two driving forces.

Firstly—and admittedly self-servingly—I had an already-established practice of using IM in the classroom, and I had a personal preference for communicating via IM. Since joining the IM platform WhatsApp in 2016, I have adopted a practice of using instant messaging groups to make class announcements, interact with students and share learning materials. Secondly—and perhaps more importantly—I was driven by a critical incident that occurred at the beginning of pandemic lockdowns. While doing some internet research on emergency remote teaching, I came across a Facebook page where students anonymously post confessions, or rather complaints, about their universities, lecturers and classmates. One particular post left a big impact on me. I read a social media post by a student anonymously pouring out her/his heart about the lack of understanding and support she/he faced trying to keep up with video-conferencing live classes despite spotty internet connectivity and other constraints that came along with the very sudden and unexpected shift to remote learning.

I was determined that no student in my class would fall behind his or her peers due to the digital divide. Telegram, a low bandwidth instant messaging (IM), allowed me to transcend the digital barrier. I knew that all my students owned their own smartphones and could easily download

and use the Telegram mobile app. From April 2020 up to the time of writing in June 2023, Telegram became the primary online learning platform for my undergraduate course on organizational communication. As campuses began reopening in 2022, I continued to explore ways to integrate new hybrid-and-physical classes into the existing frameworks of my Telegram-based IM learning pedagogy.

Drawing upon the Community of Inquiry (CoI) Framework (Garrison, 2009; Garrison et al., 2010; Shea et al., 2012, 2014), this chapter examines how Telegram's robust technological affordances facilitated a stand-alone mini virtual learning environment (VLE) with a discernable community of inquiry (CoI) for my online course.

LITERATURE REVIEW

In the following paragraphs we engage with related literature to present theoretical underpinnings for the chapter's approach to reflective inquiry. We begin with a brief review of literature discussing the uses of Telegram for teaching and learning (T&L). Next we introduce the Community of Inquiry (CoI) framework which we use as a benchmark to assess the effectiveness of my Telegram-based pedagogical approach. Finally, we present our approach to reflective inquiry.

Teaching and Learning (T&L) via Telegram

Telegram has a long history of being used to aid teaching and learning (e.g. Abu-Ayfah, 2020; Aladsani, 2021; Swartz et al., 2022; Utomo et al., 2020). One study even found that students in Telegram-based courses had a higher average success rate than students in classroom-based courses (Elfahal et al., 2021). Telegram is an application that can be used simultaneously across many browsers, mobile devices, and desktop computers. Academic users may look for journal papers and eBooks without using any additional browsers, websites, or programs by subscribing to multiple libraries via Telegram channels (Alizadeh, 2018). Many features of Telegram, such as sending big files, transcribing audio communications to text, and customizing sounds are well recognized. Furthermore, Telegram is also notable for its bots, stickers, groups, and channels. The integration of the Telegram bot on e-complaint applications at academic institutions have also been explored in research (Rosid et al., 2018).

Some drawbacks of Telegram were also reported in research, that is, a complex interface (Iqbal et al., 2020), high consumption of battery and cellular data, and inability to select more than one file for sharing (Aladsani, 2021). Furthermore, Telegram has frequently been cited as a platform where false information may spread quickly, in part due to its weak approach to content moderation (Bastani & Bahrami, 2020). For example, Western counterterrorism agencies will likely be significantly impacted in future by official and unauthorized instructions given via Telegram that may expose the followers to low-tech attacks, hacking, and operational security (Clifford, 2018).

The COVID-19 pandemic and its accompanying lockdowns have given rise to an emerging practice of using Telegram as the primary platform for teaching and learning, particularly among students (and teachers) with limited access to computers and reliable internet. For example in South Africa's University of Technology (UoT), two lecturers from the Engineering Faculty developed a Telegram teaching intervention as a low-cost and low-tech vehicle to deliver curriculum content and engage with students struggling with limited access to computers and internet data during the COVID-19 pandemic. While in Saudi Arabia, the College of Medicine at Imam Abdulrahman Bin Faisal University used Telegram to distribute educational resources including lecture slides and online question banks (Iqbal et al., 2020). Hence, we can say that Telegram facilitates the formation of an economical and effective online classroom environment as well as an inclusive and interesting microlearning experience for students during an extremely unstable and fearful period in world history.

Community of Inquiry (CoI) Framework

The CoI framework presents a dynamic model of the fundamental aspects for both the formation of community and the pursuit of inquiry in any academic learning environment. Originally developed by Garrison and colleagues (e.g. Garrison, 2009; Garrison et al., 2010) and more recently revised by Shea and colleagues (2012, 2014; Shea & Bidjerano, 2009), the CoI framework articulates the teaching, learning, social and cognitive processes central to personally meaningful and pedagogically effective learning. These processes are anchored upon interaction of multiple 'presences' within the learning environment—*teaching presence, social presence, cognitive presence* and *learning presence*.

The pioneers of CoI, Anderson et al. (2001) defined *teaching presence* as the development, facilitation, and regulation of conscious intellectual activity with its critical connection to learning and community-building that facilitates the achievement of personally meaningful and pedagogically effective learning outcomes. More recently, *teaching presence* has been defined as the design, organization, facilitation, and direct instruction and assessment usually undertaken by teachers in order to facilitate students' learning and achievement of educational goals (Shea et al., 2010). Garrison (2009) asserts that *social presence* refers to a participant's capacity to connect with the community, interact successfully in a comfortable and supportive environment and establish interpersonal connections by reflecting on their distinct identities. *Cognitive presence* is the support of higher order learning and critical thinking (Shea & Bidjerano, 2009). In other words, it is the ability of learners to generate and reinforce meaning through ongoing dialogue and speech in a constructive community of inquiry with the goal of developing critical thinking that integrates old and new information through assessment, communication and reaction (Garrison et al., 2001). *Learning presence* refers to the extent to which students are active learners who have control over their learning consumption and are behaviorally and functionally committed stakeholders in their own learning process (Zimmerman & Schunk, 2011), illustrated by self-regulation (i.e. self-discipline), co-regulation amongst peers and nodal positions of prominence wherein a student becomes a reference point for their peers (see Shea et al., 2014). This is also supported by the literature which indicates a teacher may enhance learner presence by offering students the opportunity to support their peers who are either less experienced or belong to same age group by imparting and sharing their own knowledge and skills (Honig & Salmon, 2021).

Reflecting-on-Action

My decision to adopt Telegram as my go-to online learning platform was a decision motivated by practical needs rather than pedagogical theory. In my process of conducting (and simultaneously planning and designing) the Telegram classes, I was concerned only with the here-and-now of posting the current week's class materials. I spent very little energy thinking about the Telegram class' overall framework or reflecting on my pedagogical approach. It was only after teaching two cohorts/semesters of the course did I properly stop to reflect upon my Telegram-centered teaching

practices. As such, this chapter's reflective inquiry approach is one that is based on reflecting upon practices, that is, actions, that were enacted in the recent past with the aim of analyzing and gaining deeper understanding of our teaching practices so as to inform our teaching in the future, that is, *reflection-on-action*. The term has been described in varying ways by recent scholars most of whom draw upon scholar Donald Schön's notions of *reflecting-in-action* (i.e. engaging in reflection in the midst of a task or project) to analyze one's practice and subsequently 'reframe' it based on the data collected (i.e. *reframing*) (Schön cited in Munby, 1989). This chapter takes inspiration from a more recent scholar's summary of Schön's work, as distilled in the brief excerpt below.

reflection on action after a finalized project or a specific situation [allowing] for critical reflection and the development of new strategies. (Cendon, 2020, p. 192).

My *reflection-on-action* was precipitated in part by my students' positive response to the Telegram class, which further fueled my intrinsic motivation to teach via Telegram and to share my experiences and reflections with other educators, which I did through webinar presentations and a book chapter. My reflective inquiry attempts were inspired by positive feedback and positive experiences teaching via Telegram which led me to attend talks and to read guide books related to online learning. I stumbled upon the CoI framework for online learning, describing the various CoI 'presences' that contribute to meaningful attainment of learning objectives, leading me to compare the teaching and learning in my Telegram class against these CoI presences. As will be discussed below, my reflective inquiry of CoI presences in my Telegram class drew my attention to the imbalance between teaching presence, learning presences, social presence and cognitive presence in my class.

I used a variety of tactics to facilitate *social presence* by creating smaller Telegram groups for interactive small group discussion. To facilitate *learning presence*, I made attempts via my Telegram 'mini lectures' to break down learning topics into smaller chunks via short texts messages, short voice messages, and simple images as alternatives to presentation slides. To facilitate *cognitive presence*, I similarly designed short quizzes at the end of topics to support learning retention and stimulate thinking. I occasionally highlight and explain to my students the logic behind my use of short texts to deliver content and my use of mini quizzes as both formative and summative assessment of their learning.

PEDAGOGICAL APPROACH ADOPTED IN TEACHING AND LEARNING VIA TELEGRAM

Telegram's text messaging, voice texts, short video messages are perfect for breaking down information into smaller chunks and thus aids in improved learning outcomes and fosters productive discussion, particularly for a learner already adept at communicating via instant messaging. As a microlearning tool, Telegram may be used to enhance communication between teachers and students. One may simply enhance students' engagement by using a hybrid microlearning technique on Telegram. However, When I first envisioned using Telegram as the main (or only) platform for my online class, I initially aspired to use microlearning as my main pedagogical approach. Microlearning is an evolving elearning trend (Giurgiu, 2017), characterized by small learning modules and micro assessments (Bundovski et al., 2014) and short-time activities, (Hug et al., 2006) like small podcasts, mini paragraphs and brief definitions (Zhang & Ren, 2011).

However, at the time, I only had a superficial understanding of microlearning, and a very fuzzy notion of what a microlearning class might look like. My Telegram class consisted of creating multiple Telegram *groups* and *channels* which I instructed students to join via Telegram invitation links posted in the course Moodle page and main Telegram group. In my own Telegram account, I used Telegram's 'folder' feature to organize all Telegram groups and channels belonging to the same course. Each student joins a main class Telegram group which serves as the class communication platform used for announcements as well as informal chats. I delivered each weekly Telegram class in a separate Telegram channel. I posted channel invitation links in the main Telegram lecture channel.

I did not begin my Telegram class with the intention of creating a CoI as I only discovered the CoI framework sometime later. However, after two semesters teaching via Telegram, I engaged in *reflection-on-action* and realized that my teaching practices in the Telegram class serendipitously aligned with 'presences' in the CoI framework.

Teaching Presence and Learning Presence

I inadvertently enacted *teaching presence* quite extensively in the designing and structuring of my Telegram class in the following way:

1. Announcing the week's mini lecture via our class Telegram chat group, named the 'Class Communication Platform'.
2. Creating a new Telegram broadcast channel for the current week's topic and copy-pasting its link to a Telegram lecture channel that functioned as a portal or a table of contents listing the links to each week's Telegram mini lecture
3. In the week's 'mini lecture' channel, I posted the week's topic introduction consisting of:
 - A short video message welcoming the students and introducing the week's topic
 - A text message with an introductory summary of the week's topic
4. I conducted didactic teaching via a series of voice messages, text messages, images, links and attachments, arranged in a narrative order of subtopics or ideas, similar to the arrangement of subtopics/ideas in a traditionally-delivered lecture:
 - Most voice messages are between 5 seconds and 60 seconds long, some with captions (e.g. keywords and summary bullet points) to make it easy for students to identify the contents of the voice message
 - As a replacement for conventional PowerPoint slides, I post images of handwritten 'whiteboard' keywords, short phrases and diagrams/sketches to illustrate a point.
 - Often I provide links to external online sources such as YouTube videos, online articles, websites. Upon occasion, I attach PDF or Word files.
 - Occasionally, I will post interspersed text messages in the form of short notes or bullet points
5. I created an assessment activity in the form of:
 - a quiz created using Telegram's quizbot, and
 - a small group discussion using Telegram chat groups as 'break-out rooms' consisting of three to six students per group
6. I ended each weekly 'mini lecture' with a topic closing consisting of:
 - A short video or text message summarizing the week's topic and bidding students goodbye.

To some extent, the abovementioned Telegram 'mini lectures' did adhere to microlearning notions of delivering bite-size materials, as each individual Telegram voice message and text message was kept short, and I deliberately chose short readings and videos when sharing external

resources. However, each week's 'mini lecture' consisted of dozens of messages, and the entire 'mini lecture' could take up to an hour or more to complete, thus defeating the core microlearning practice of bite-size learning in under 15 minutes.

However, my partial attempts at microlearning serendipitously resulted in a pervasive *teaching presence*, as described by the CoI framework (Akbulut et al., 2022). It was achieved by responding to the questions and problems of the students, being approachable in the class Telegram group used for communication, and providing them with helpful, timely feedback.

Through a strong *teaching presence* in the Telegram class as described earlier, I facilitated a weekly *learning presence* among the students. The structured weekly mini lectures guided students through their learning, while the weekly pre-class announcements about the week's newly available mini lecture served as a gentle reminder to 'attend' class. Students then played their part in enacting *learning presence* through self-regulation of joining each week's class and reviewing previous lessons in a timely manner. Telegram channels record the number of views that a post has received, and through this I was able to ascertain the number of students who had completed the weekly lecture, thus indicating *learning presence* for each weekly topic. Additionally, I created small discussion groups which sometimes facilitated opportunities for *learning presence* where students practice self-regulation (e.g. being on time and respecting group norms) and co-regulation (e.g. taking lead to initiate discussion and to help remind each other of important tasks).

Social Presence and Cognitive Presence

I attempted to facilitate connection, identity and a sense of belonging in my Telegram class by using Telegram chat groups to encourage interaction, making an attempt to foster *social presence*. I regularly used the class Telegram chat group as our main communication channel where I interacted with students informally and encouraged them to interact with me and with each other. To create an informal and friendly atmosphere, I used emojis, GIFs and stickers in my chat messages. Taking cue from my chat messages, students also encouraged each other and sometimes even sent me encouraging messages, often using emojis and stickers as well. In addition to the main class chat group, I also created small Telegram discussion groups consisting of three to six students per group, in part to provide a

space where students could potentially feel a sense of belonging within a smaller group setting.

However, unlike the high degree of *teaching presence* and the highly evident *learner presence*, I found that *social presence* was not as strong in my Telegram class. It was usually the same few students who would reciprocate my attempts at friendly interaction. It was also the same few students who usually took initiative to ask or answer questions on behalf of the class. Similarly, not all the small discussion groups were active with conversations.

Students only interacted in these groups when I instructed them to discuss a weekly topic. I also learned that I had to post very specific instructions and guidelines, sometimes with marks, in order to get students to participate actively in the discussion group. However, in the slightly rare instances where students undertook active discussion in their smaller Telegram chat groups, I often noticed a high level of intellectual and academic discourse. *Cognitive presence* was often evident in the students' impressive efforts at discursive meaning making through group discussion. They displayed insightful ideas, and through back-and-forth discussion, they engaged in peer teaching, correcting each other's misconceptions and coming to surprisingly intelligent conclusions.

Upon reflection, I realized that such impressive *cognitive presence* only took place in response to my instruction to engage in discussion, coupled with clear prompts and detailed guidelines on how I expected them to proceed with the discussions (see Fig. 13.1). Additionally, students received instructions integrated in a variety of activities, including reading assignments, reflections, video lessons, discussion forums and voice messages.

In other words, *teaching presence* was a necessary prerequisite for facilitating the kind of *cognitive presence* I hoped for. The *teaching presence* that I found successful came in the form of both structuring the group discussion (i.e. specific question and prompts) and facilitating the discussion norms (detailed guidelines on how to conduct the discussion). I made an effort to incorporate group engagement and promote interactive, real-world discussions in the classroom by encouraging students to draw connections between the organizational concepts taught in the course and their own real-life experiences as organizational members.

At the beginning of the semester, students were asked to describe an organization they previously or currently belong to, and their role or activities in those organizations. Students enthusiastically shared their

Hi everyone

Please discuss the two concepts you learned about the two different ways of thinking about Organizational Communication:

- Communication in organizations*
- Organizations as communication*

To guide your discussion, below are two prompts you may use:

1) Share to the group what you find most interesting about the two different views of Organizational Communication?

Or

2) Share example of "organizations-as-communication" from your own experience as a member of an organization (e.g. student in a class/school; member of a club; part-time employee in a company)

And

3) Ask a question about something you don't understand about.

Each person must:

- Share or ask at least one idea/question about the topic*
- Respond to at least two other students' post*
- In total, post or respond minimum three times in this discussion*

I hope the instructions above will help your discussion and peer learning.

Please respond to each other's comments and questions so that you can have a discussion and learn from another. □

Fig. 13.1 Sample instructions for group discussion

experiences as organizational members. The organizations were varied, ranging from school or university clubs, associations and sports teams, to part-time or temporary employees in companies, their roles in family businesses, and even as entrepreneurs in microbusinesses. Throughout the

semester, in their quiz questions, final assessments and group discussions, students would use their own experiences as examples and case studies to illustrate or discuss concepts and ideas introduced in the course Telegram mini lectures.

DISCUSSION

As I write this chapter, I grew conscious of my *reflection-on-action* as a realization dawned on me that I had not taught my students how to organize their course in their own Telegram accounts. I realize that in this instance I did not adhere to a fundamental rule of e-learning which is to provide technology training to students. And this fundamental oversight means that I also failed my own core value of ensuring equal and fair access to my online class, as access is not only predicated on access to technology, but also the competencies and literacies to effectively use the technology. Hence, we can say that the utilization of devices and technology, accessibility and support are all equally important in order to provide a good e-Learning-based learning environment (Aquino & BuShell, 2020).

Furthermore, the notion of our class being a CoI is in essence an abstraction in my mind as I reframe the Telegram class through my dual teacher-researcher role. Unless they had somehow stumbled upon my webinar presentations, my students have not been privy to this teacher-centric reframing of their learning experience.

Nevertheless, while my Telegram-based classes initially emerged from an internally driven exercise of my teacher's prerogative, Telegram's inherent characteristics and technological affordances does make it a robust T&L platform with discernible elements of an online community of inquiry (COI). As has been argued for other online learning cases within the CoI literature, I similarly argue that *teaching presence* is possibly the most crucial CoI presence within a Telegram class. In particular, the design of the online course and the facilitation of course activities lie primarily within the teacher's control through his/her *teaching presence*. Furthermore, *cognitive presence* may very well be contingent upon a more traditional authoritative teaching style where learning activities are not optional but compulsory, whether they are made so through the introduction of grades or even through sheer insistence from the instructor. To truly facilitate a CoI, in my next Telegram-based semester class, my *teaching presence* practices must integrate Telegram VLE training and introduction of the CoI framework to my students to truly empower their *learning*,

social and cognitive presences. Students participate in activities other than reading, listening, or watching during active learning on Telegram to build meaningful relationships with other members of the class and to enhance their cognitive and learning capabilities. To help the students develop communication skills, the instructor should have them participate in large or small group talks rather than make them memorize information.

CONCLUSION AND RECOMMENDATION

This chapter has presented theoretical and practical guidelines for researchers and instructors interested in incorporating Telegram into a blended-learning methodology, given that the CoI framework is a novel way to teach that has recently been introduced to e-learning practices. It is recommended that the primary goal of the class should be to grasp a community of inquiry or, at the absolute least, to comprehend the role of instructors and students in building a learning community. Furthermore, the concept of CoI should not be limited to the instructor alone. Students must also be made aware of the teacher's vision to expand a learning community in the classroom. After all, the bedrock of any 'community' rests upon meaningful engagement of all community members (Robinson & Hullinger, 2008). In a community of inquiry (COI), true *social presence* and meaningful *cognitive presence* is best achieved through engagement by both teacher *and* learner, that is, *teaching presence* as well as *learning presence*. We recommend academics to introduce CoI as a guiding framework for learning at the very beginning of the semester to better engage and socialize students into a meaningful learning community. We also recommend instructors to be mindful and deliberate in integrating CoI into the curriculum so as to maintain a balance between teacher presence and student presence in online and hybrid learning environments. We believe that this study will serve as a starting point for future efforts to both create and research robust online CoIs, within low-bandwidth instant messaging platforms like Telegram.

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