A Phenomenographic Exploration of the Factors Influencing Teacher Social Presence in Professional Development Webinars

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Abstract
This study investigates the challenge of establishing social presence in professional development webinars, which lack face-to-face interaction and physical presence. Using the Community of Inquiry framework, the research examines factors influencing teacher social presence. Following phonomyography research methodology, research data were collected from eight university teachers through a semi-structured questionnaire. Findings highlight attempts made to foster social presence in professional development webinars, with cultural backgrounds of speakers and participants positively influencing the outcome. Practical implications for enhancing social presence in webinars are derived from the study. By shedding light on the multifaceted nature of social presence and its influential factors, this research contributes to the understanding of professional development webinars, emphasising the importance of creating a social presence within the digital learning environment.

Keywords: higher education, phonomyography, semi-structured questionnaire, social presence, teacher professional development, webinars

1. Introduction
Professional development webinars are widely utilised in higher education as a means of delivering continuous training and support to academic staff due to their effectiveness in facilitating learning (Ebner & Gegenfurtner, 2019). These webinars serve as valuable tools for equipping teachers with essential pedagogical knowledge and skills (Bozkurt & Sharma, 2020), while also offering advantages in terms of accessibility (Gegenfurtner et al., 2020) and cost-effectiveness (Toquero & Talidong, 2020).

In addition to delivering content and pedagogical knowledge, webinars have proven to be instrumental in enhancing teachers’ technological capacity and proficiency in online teaching and learning (Ancho & Arrieta, 2021). Notably, when compared to face-to-face professional development presentations, teachers expressed higher levels of satisfaction with the content and format of webinars (Sakulprasertsri et al., 2022). The utilisation of professional development webinars in higher education therefore emerges as a valuable approach to effectively enhance teaching practices, offering numerous benefits in terms of knowledge acquisition, skill development, accessibility, and overall satisfaction among academic staff.

Although webinars have demonstrated their efficacy in improving teachers’ knowledge and practices, the issue of social presence in these platforms has raised concerns regarding the overall quality of learning experiences. Ancho and Arrieta (2021) highlighted the absence of collaboration and interaction within webinars, emphasising the need for increased collaboration and interaction among participants. Similarly, Sakulprasertsri et al. (2022) identified limited collaboration and interaction among teachers during professional development webinars. Consequently, it becomes imperative to enhance social presence within these webinars to foster the development of a community of inquiry, thereby facilitating meaningful learning experiences.

In face-to-face settings, establishing social presence requires minimal planning due to the physical presence of community members. However, in online environments where participants (teachers and students) are not physically present, significant planning decisions are necessary. Social presence is characterized as an individual’s ability to project themselves and how others perceive this projection within the learning community, resulting in a sense of connectedness among members (Barreto et al., 2022; Swan et al., 2003; Swan & Shih,
The Community of Inquiry Framework considers social presence as an essential component of any educational experience, defining it as members’ capacity to present themselves as genuine individuals to other community members (Garrison et al., 1999). Additionally, the framework encompasses cognitive presence, which refers to the participants’ ability to construct meaning through ongoing communication (Garrison et al., 1999). These two elements work in tandem with teaching presence, which entails the teacher’s role in designing and facilitating an educational experience that fosters sustained communication and connectedness among community participants (Garrison, 1999).

Achieving a high social presence in online settings has been associated with higher students’ success and satisfaction levels (Miao et al., 2022; Oyarzun et al., 2018; Strong, 2012). However, establishing social presence is difficult due to many factors. First, replicating facial expressions, posture, and non-verbal and vocal cues that define social presence in asynchronous and synchronous online environments is difficult (Tu, 2000). Despite the flexibility online learning offers, students feel isolated and disconnected from their peers (Flener-Lovitt et al., 2020). In addition, the quality and quantity of interaction (Dziuban et al., 2015), the group discussion (Akcaoglu & Lee, 2016), the group size (Akcaoglu & Lee, 2016), the type of technology used (Tu, 2000) and the types of interaction (Oyarzun et al., 2018) are factors contributing to the social presence in online environments.

Culture has an influence on the online learning environment, and it can impact the forms of participation, interaction and power sharing (McLoughlin, 1999). Although cultural differences in online environment settings might negatively impact learning, a cross-cultural learning environment might encourage diversity in cases and examples being discussed in online classes or webinars (Liu et al., 2010). To foster a culturally responsive online offering, the offering should be flexible to allow the participants to freedom to choose their learning/teaching styles (Collis, 1999; McLoughlin, 1999).

The higher education institution I work for conducts a series of webinars for teacher professional development every semester. These webinars are conducted by internal speakers from the same institution and some sessions are conducted by external speakers. Even though the culture of learning in this context is Eastern-oriented culture that is described as a group-based, teacher-dominated, centrally organised pedagogical culture with formative and summative examinations as the essential tools for defining performance and competition (Zhang, 2007), many teachers have studied and taught in Western-oriented cultures were dialogues and interactions are more encouraged in the learning process (Zhang, 2007). Although anecdotal evidence has shown that these webinars helped teachers improve their content and pedagogical knowledge and skills, they lack teachers’ social presence and interaction, and most of the time the teachers remained passive recipients during these sessions. Therefore, the study attempts to explore factors, especially cultural factors that influence teachers’ social presence in professional development webinars. The study is guided by the following research question: What factors influence teachers’ social presence in professional development webinars?

This study not only holds practical implications within the specific context of the research but also offers a valuable opportunity for higher education institutions to enhance the design of professional development webinars by fostering higher levels of teacher social presence. Moreover, this investigation provides insights into cultural factors that may impact social presence within these webinars. Consequently, the findings hold educational benefits for webinar presenters, who can learn strategies to promote social presence, as well as for teachers, who can acquire strategies to actively engage and cultivate social presence in professional development webinars.

2. Literature Review

A search on SCOPUS database was conducted using the following search string: [webinars OR “webinar-based learning” OR web-conferencing OR webcast AND “teacher professional development” OR “teacher training” AND “social presence” AND “cultural issues”. An additional search was conducted on Google Scholar. The search yielded 55 manuscripts. A title/abstract screening was performed on the search results, and 21 studies were included for full-text review and analysis. For coherency and better readership, this review is structured based on two themes: the first discusses research on social presence in online environments and the latter discusses professional development webinars.

2.1 Social Presence in Online Environments

Social presence is crucial in online learning environments because it impacts students learning, satisfaction and interaction (Barreto et al., 2022; Miao et al., 2022; Oyarzun et al., 2018; Swan et al., 2003). Investigating the impact of teacher-student interaction and student-student interaction in online learning environments, Miao et al.
higher order learning and engagement. Similarly, Oyarzun et al. (2018) reported that teacher-student interaction in online conferencing had a positive impact on satisfaction and learning. Swan and Shih (2005) concluded that students engaging in self-disclosure activities and speaking to the group are more engaged in online courses. Also, Rosenthal and Walker (2020) reported that students enjoyed the lectures with a high degree of social presence.

Miao et al. (2022) suggested a set of different activities that can enhance social presence in online environments, such as interactive discussions, case-study analysis, problem-based learning and collaborative learning activities. Also, the study reported the need to foster student-student interaction through peer interaction and collaborative knowledge sharing and construction, which have a significant influence on social presence (Miao et al., 2022). Knowledge sharing behaviour, which is the continuous engagement of members in the community and the ability to share knowledge with other members, is fostered in a learning environment with a higher social presence (Catyanadika & Rajasekera, 2022). Different technologies were found to support establishing social presence in online environments, such as online forum discussions (Hara et al., 2000), digital storytelling (Lowenthal & Dunlap, 2010) and wikis (Augar et al., 2004). These synchronous applications enhance learners’ confidence and lessen their isolation in online settings (Hrastinski, 2008; Rockinson-Szapkiw et al., 2010).

Different issues might hinder achieving good levels of social presence in online environments. Research on students’ interaction in online settings reported that many students remain passive in synchronous sessions, and they have a preference to communicate with teachers in writing than in speaking (Palvia et al., 2018). Also, students tend to be less motivated to participate and socially engage in communication when the topics of discussion are not of interest (Wut & Xu, 2021). Also, Gunawardena and Zittle (1997) claimed that students feel embarrassed to reveal their social identity in virtual communication. Finally, internet-related barriers and lack of professional training might negatively impact social presence in virtual settings (Nkonge & Gueldenzoph, 2006).

The studies reviewed in this section highlighted the need for fostering social presence in online settings due to its positive impact on learning. Although there are different strategies that can be employed, it remains a challenging task. Referring to the argument made earlier in this paper, the current study attempts to consider the issue of weak social presence from a cultural perspective in an adult professional learning setting.

### 2.2 Professional Development Webinars

Webinars have recently become popular for teacher professional development. They provided training opportunities for teachers in “content, pedagogy, leadership, management, online teaching and learning and mental health” (Ancho & Arrieta, 2021, p. 25). They enhanced teachers’ pedagogical, technological and research knowledge (Sakulprasertsri et al., 2022), life-long learning skills (Alvarez & Corcuera, 2021), knowledge of synchronous and asynchronous online teaching (Tanucan & Uyttico, 2021), and collaborative knowledge construction (Toquero & Talidong, 2020). In addition, teachers valued the ease of accessibility and geographical flexibility of webinars (Gegenfurtner et al., 2020).

Although research on teacher social presence in professional development webinars is very scarce, some research identified issues and challenges concerning this aspect. For instance, Ancho and Arrieta (2021) reported that teachers were not engaged in the content and did not collaborate with other participants. Hence, they recommended that these webinars should provide more collaborative opportunities for participants through collaborative learning strategies, problem-based learning and contextualising these provisions based on teachers’ needs. A similar issue was reported in Sakulprasertsri et al. (2022) who attributed limited collaboration and presence to “the conventional lecture format [in the webinars] in which the talk and the discussion sections were separated” (p. 313). Based on this result, the study recommended more hands-on practice and practical activities (Sakulprasertsri et al., 2022). For higher levels of interaction, Gegenfurtner et al. (2020) recommend using polls, breakout rooms and discussion boards, which can help the participants express themselves in the webinars.

Webinars can offer different instructional features that can support the establishment of social presence. For instance, Cornelius and Gordon (2013) listed screen sharing, using the chat for questioning and answering, online polls, virtual group work and immediate feedback as instructional tools that can facilitate interaction and aid reflection. In addition, synchronous discussions in webinars can be used for group reflections and shared-objective discussions (Häkkinnen & Järvelä, 2006), and opportunities to interact with the facilitator (Gegenfurtner et al., 2020). This paper seeks to investigate the use of these tools through the lens of the Community of Inquiry framework.

Previous research on professional development webinars explored teachers’ attitudes towards webinars, their satisfaction and their accessibility and convenience. Despite their impact on teachers’ knowledge and skills, they
lacked teachers’ collaboration and engagement (Ancho & Arrieta, 2021; Sakulprasertsi et al., 2022). There is a
dearth of empirical research concerning the cultural and social factors that have influenced social presence,
interaction and engagement. This paper seeks to contribute to this gap by exploring teacher social presence
through the Community of Inquiry framework as a conceptual lens.

3. Method

3.1 Ontological and Epistemological Underpinnings

Adopting a relativist ontological perspective, this study considers reality as a construct comprised of diverse
truths, each shaped by the individual’s subjective interpretations and assigned meanings. As such, I acknowledge
that the participating teachers in this research may have interpreted the phenomenon under investigation
differently, influenced by their social beliefs, cultural background, interactions with others, and personal
assumptions (Guba & Yvonna, 1994). Furthermore, I perceive my interactions with the participants as
instrumental in reconstructing the meaning attributed to the phenomenon being studied (Kivunja & Kuyini,
2017). In alignment with an interpretive epistemology, I employed this approach to facilitate the interpretation of
teachers’ subjective meanings and assumptions, which were shaped by their past experiences, lived encounters,
and interactions within the specific context of this study.

3.2 Conceptual Framework

To systematically gather data about teachers’ social presence in professional development webinars, I employed
the Community of Inquiry Framework as a conceptual framework (Garrison et al., 1999). The Community of
Inquiry Framework (Figure 1) values the importance of community and critical thinking in distance online
environments (Garrison et al., 2001). It consists of three overlapping elements—social presence, cognitive
presence and teaching presence—that are crucial for a successful higher educational experience and are often
employed to enhance computer conferencing in higher education, critical thinking and learning (Garrison et al.,
1999, 2001; Thompson et al., 2017). Social presence is a core component in the framework which refers to “the
ability of participants in the community to project their personal characteristics into the community, thereby
presenting themselves to the other participants as real people” (Garrison et al., 1999, p. 90). Also, the framework
consists of cognitive presence, which is “the ability of the participants in a community of inquiry to construct
meaning through sustained communication” (Garrison et al., 1999, p. 4). In addition, teacher teaching presence is
crucial, which relates to teacher’s role in designing and facilitating an educational experience that develops
communication and connectedness among participants of the community (Garrison, 1999).

![Community of inquiry framework (Garrison, 1999)](image-url)

Figure 1. Community of inquiry framework (Garrison, 1999)
3.3 Research Methodology

The selection of a phenomenography research methodology for this study was deemed appropriate, as it offers a means to explore the variation in meanings, understanding, and conceptions, as well as the expression of ways in which individuals experience a specific phenomenon (Åkerlind, 2008; Marton, 1986; Tight, 2016). Given the diverse cultural backgrounds of the teachers comprising the research sample, a phenomenographic approach facilitated the identification of variations in their experiences of the key features associated with the phenomenon, including those that teachers discern or fail to discern in their encounters with the phenomenon (Åkerlind, 2008). Moreover, this approach provided a second-order perspective to the research, presenting insights into how the participants experienced professional development webinars within a specific context (Khan, 2014).

3.4 Research Context

The research was conducted within an Omani higher education institution that regularly organises a series of professional development webinars aimed at enhancing the knowledge and skills of its staff in various areas such as content, pedagogy, and research. These webinars are organised by individual departments, with invitations extended to all teachers within the institution. While some webinars are facilitated by teachers from the same institution, others feature external speakers. The duration of each webinar ranges from 25 to 45 minutes, and attendance is mandatory for the department hosting the webinar while being optional for teachers from other departments. The webinar topics cover areas such as online pedagogy, teaching platforms, course management systems, online teaching/learning tools, online assessment, and research skills. In addition to local webinars, the participants also engaged in selected national and international webinars.

The study sample included eight university teachers with over 10 years of teaching experience at tertiary level. Six teachers hold Master’s degrees and two hold Ph.D. degrees. The participants have attended over ten webinars. They represented two cultures: Asian Arab culture and East-Asian non-Arab culture.

3.5 Data Collection and Data Analysis

The data collection process employed a semi-structured questionnaire, chosen for its open-ended format that allows participants to express their thoughts and provide responses based on their own understanding within a specified timeframe (Cohen et al., 2007). This approach was deemed suitable as it yields a more comprehensive and meaningful outcome, particularly in research areas involving personal opinions, such as the construction industry (Adejimi et al., 2010, p. 49). Given the participants’ demanding schedules, conducting interviews posed challenges; therefore, utilizing a questionnaire offered a practical alternative. Additionally, allowing participants ample time for thoughtful reflection before composing their answers was a deliberate consideration.

The semi-structured questionnaire consisted of two parts. Part one collected demographic information about the participants: their teaching experience, their origin country, and the number of webinars they have attended. Part two consisted of eight open-ended questions, related to their social presence in professional development webinars. The conceptual framework used in the study guided the writing of the items of the questionnaire. To ensure content validity, the questionnaire was reviewed by two of my colleagues at work who are familiar with the context. It was also reviewed by two of my friends in the same PhD cohort. The questionnaire was created on Google Forms, and it was distributed to the participants by e-mail. The participants signed a consent to take part in the study, and an information sheet including some details about the study and the nature of participation was sent to them. The participants were given a week to answer the questions. For ethical considerations neither the names of participants, names of speakers in the webinars, nor the name of the institution was declared in reporting the results of the semi-structured questionnaire.

An inductive thematic analysis following Braun and Clarke’s (2006) six-phase guide (data familiarisation, coding data, searching for themes, reviewing themes, defining and naming themes and writing up) was used to analyse the research data. ATLAS.Ti (qualitative data analysis software) facilitated the data analysis.

4. Findings

The inductive thematic analysis identified three themes: strategies used for establishing social presence in professional development webinars, and factors influencing social presence in professional development webinars.

4.1 Strategies Used for Establishing Social Presence

The results revealed that some attempts were made to establish social presence in the professional development webinars. Figure 2 provides a summary of these strategies. The participants reported some strategies that contributed to making a collaborative learning environment. For example, Teacher A mentioned that some
speakers asked questions and requested participants to share answers in the chat box. She added that she was asked to attempt some questions on a website that was created by the speaker, and several responses were discussed in the session. Similarly, Teacher C mentioned that the speaker in one of the webinars used Mentimeter (an online interactive presentation software) to engage the participants in some discussions. To promote a collaborative learning environment, Teacher E said that the presenter “divided the participants into breakout rooms to discuss some topics”. Teacher G added, “in a webinar on creating online quizzes in Moodle, the presenter gave us some time to work collaboratively in breakout rooms to create short quizzes. Then, each group showed and discussed their quiz with other participants in the general room”.

Some strategies were used to create a risk-free environment for teachers to share their ideas and express their emotions. This was crucial to foster group cohesion and group communication (Garrison et al., 1999). First, welcoming and encouraging free communication and expression of ideas by the presenter. Some participants reported that their ideas shared in the chat box were welcomed by the presenter. Second, allowing the use, commenting on and reading of participants’ contributions in the chat box encouraged more social presence. For example, Teacher D felt happy when the presenter commented on what she wrote in the chat box. Teacher G mentioned that the speaker of one of the webinars encouraged the participants to share emoticons in the chat box after some intervals indicating their understanding levels and their feelings about sections of the presentation. She added that the presenter had a question/answer discussion three times at the end of the main parts of his presentation. Hence, these strategies allowed the participants to present themselves as real people, involved in the community despite their different cultural backgrounds. This does not only indicate the cognitive presence of the participants, but it also indicates a sufficient level of teaching presence. The speakers were able to facilitate direct instruction and building understanding by focusing the discussion and sharing personal meanings with the participants.

- Presenter asked questions and participants shared answers in the chat box.
- Participants attempted questions on a speaker-created website, with discussions.
- Speakers used Mentimeter for interactive discussions.
- Participants were divided into breakout rooms for topic discussions.
- Breakout rooms were used to collaboratively create and share quizzes.
- Presenter encouraged open communication and idea expression.
- Presenter acknowledged and commented on participants’ chat contributions.
- Participants used emoticons in the chat box to indicate understanding and feelings.
- Question/answer discussions were held at key points.
- Participants presented themselves as real people despite cultural differences.
- Speakers facilitated instruction by focusing on discussion and personal meanings.

| Figure 2. Summaries of strategies used to establish social presence |

4.2 Factors Influencing Social Presence in Professional Development Webinars

Speakers’ cultural backgrounds had an influence on teacher social presence in the professional development webinars. Teacher A said, “when my friend, who shared similar cultural background, presented, I felt more relaxed to share my ideas”. Teacher B was hesitant to attend a webinar that was conducted by a speaker who was her classmate. However, when she attended the webinar, she felt relaxed, and she could share her personal experience with the participants freely due to their shared cultural backgrounds. In another webinar on teaching writing to EFL learners, although the speaker did not share same cultural background as most of the participants (Arab culture), Teacher E said that the participants felt socially engaged because the speaker asked them to discuss the issues presented in relation to their culture. Although self-expression is difficult in Arab cultures when the speaker was neither from the same culture as the participants or not from the same institution, Teacher H said that the chat box option provided a safe environment for self-expression despite cultural differences. This indicates a higher level of collectivism and relatedness in which teachers were guided by common values based on cultural similarities. However, other participants from Western cultural backgrounds who tend to be more individualistic did not impact the social presence of other teachers because they formed a minor population in
these webinars (less than 30%).

The teachers felt more present in webinars conducted by external expert speakers compared to internal speakers. Also, when teachers know more about the topic being discussed, they participate confidently. Teacher B said, “I enjoyed participation when the topics were related to my daily practices and my existing assumptions”. Also, Teacher F said, “when I know about the topic of the webinar, I enjoy the discussion in the chat box”. Teacher H also felt that the summary, the objectives of the webinar and the biodata provided a week ahead of the webinar allowed her to get ready which reflected on her social presence. She said, “some topics were very interesting, so I read the summary and sometimes I googled about the topic. This helped me to be socially involved in the session because I prepared some notes and questions for the discussion”. It can be noted here that a higher social presence is associated with cognitive presence which was evident in their preparedness for the webinars and exploration of the topics being discussed.

5. Discussion

Although previous research identified some difficulties in establishing social presence in virtual environments (Gunawardena & Zittle, 1997; Nkonge & Guelenzoph, 2006; Palvia et al., 2018; Rockinson-Szapkiw et al., 2010; Wut & Xu, 2021), the results indicated there was a decent social presence in the webinars. This higher level of social presence explained the higher level of interactivity. This was established using some features of online conferencing software, such as polls, chat boxes and breakout rooms. Based on the Community of Inquiry Framework, the results showed that ‘group cohesion’ and ‘open communication’ were more evident than ‘emotional expression’ (Garrison et al., 1999). Speakers achieved ‘group cohesion’ by encouraging the participants to collaborate with other participants and the speaker. However, teachers revealed that they had a higher interaction level with the speaker and the content than with other participants. ‘Open communication’ was fostered through the risk-free environment that was evident in the webinars. The majority of participants being from an Eastern cultural background might explain the lack of emotional expression in the webinars as they tend to be less expressive, less critical and less opinionated in online discussions (Abu-Hilal et al., 2015; Zhang, 2007). The use of synchronous instructional tools such as polls, chat boxes and discussion boards facilitated social presence (Hrastinski, 2008; Rockinson-Szapkiw et al., 2010).

Speakers sharing similar cultural backgrounds with participants had an impact on social presence. Although most participants were from Eastern cultures which are known to be less critical and expressive in discussions (Liu et al., 2010), they were able to project themselves as real people and participate in the webinars. The high cognitive presence, evident in their familiarity and interest in the topics, led to higher motivation levels (Shroff et al., 2008). In addition, speakers demonstrated a good level of teaching presence characterised in instructional management. Good instructional management helped speakers define and initiate discussions (Garrison et al., 1999). However, these cultural issues were not so prevalent because the participants and the speakers shared similar cultural backgrounds with minor differences.

6. Conclusion

Using various online tools to encourage teachers to participate in discussions increased their social presence (Akcaoglu & Lee, 2016). In addition to the higher cognitive and teaching presence (Garrison et al., 1999), sharing a similar culture with minor differences has positively contributed to social presence. Based on the findings of this study, higher education institutions should inform the participants ahead and provide them with a summary of the webinars to allow them to prepare (Wut & Xu, 2021). Webinars should be flexible so that participants should be allowed to choose their learning styles (Collis, 1999; McLoughlin, 1999) Presenters should use different tools to encourage participation and collaboration, such as online discussions (Hara et al., 2000), synchronous online polling (Hrastinski, 2008) breakout rooms and discussion boards (Gegenfurtner et al., 2020) and the chat box (Cornelius & Gordon, 2013). Participants should be encouraged to be on camera during the webinars to communicate their facial expressions, posture and non-verbal cues (Tu, 2000). Furthermore, webinars should focus hands-on practice and practical activities to enhance social presence (Sakulprasertsri et al., 2022).

Three limitations should be considered in this study. Due to time limitations, exploring cognitive presence and teaching presence was beyond the scope of this study. Also, the participants only represented two cultural backgrounds. Instead of the semi-structured questionnaire, using semi-structured interviews or a focus group discussion could have yielded richer research data.

Future research might investigate social presence in relation to the teaching presence and cognitive presence. Additional research is needed to analyse the type, medium and quality of interactions in professional development webinars. Finally, using an interventionist research methodology is needed to address the
influential factors of social presence identified in this research.

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