Asian Journal of Distance Education

Doing and being together to learn with and from others in e-learning: The Theoretical Model of Social Presence in e-Learning: MSP- elearning

Annie Jézégou

Abstract: This article provides responses to the following questions: what are the major properties of 'remote presence'? What is meant by social presence in e-learning? What are the specific characteristics of the theoretical model of social presence in e-learning (MSP-elearning)? The responses offered are the result of work on characterisation of 'remote presence', conceptualisation and modeling of social presence in e-learning, carried out between 2012 and 2019. Since then, this work has been the subject of several publications, but exclusively in French. This article contributes to give it greater international visibility. Specifically, it outlines the essential aspects of the theoretical model of social presence in e-learning (MSP-elearning), while highlighting its fundamental differences from two other equally interesting theoretical models. This article also contributes to emphasizing that *"doing and being together to learn with and from others*", despite the geographical distance, is both the suject and the major challenge that this model addresses to the scientific community and practitioners in the field of e-learning.

Keywords: e-learning, remote presence, distance, proximity, theoretical model, social presence, socio-cognitive presence, socio-affective presence, pedagogical presence.

Highlights

What is already known about this topic:

- The most internationally recognised theoretical model of presence in e-learning is the 'Community of Inquiry in e-learning' model.
- Social presence is approached differently depending on the theoretical models used, as is the case for the three theoretical models presented in this article.

What this paper contributes:

- It helps to understand the concept of 'remote presence' by attributing five key properties to it.
- It summarizes the two main English-speaking origin theoretical models of social presence : the CoI Model and the Social Presence Model in e-learning (SPM). It outlines the primary critiques directed at them.
- This paper outlines the essential aspects of the French-speaking origin Model of social presence in e-learning (MSP- elearning). The three dimensions of this presence: socio-cognitive, socio-affective and pedagogical, the categories of associated indicators; its modelling.
- It provides a summary of six significant empirical studies carried out since this model was finalised in the early 2020s.

Implications for theory, practice and/or policy:

- The theoretical model of social presence in e-learning (MSP - elearning) opens up promising prospects for empirical research. The approach consists of successive iterations between theory and empirical studies to test the validity of its construct and, if possible, its universality.
- It also constitutes a resource for engineering social presence in e-learning.
- *"doing and being together to learn with and from others*", despite the geographical distance, is both the suject and the major challenge adressed by this model the scientific community and practitioners in the field of e-learning.

Published by Asian Society for Open and Distance Education (ASODE), Japan
ISSN 1347-9008 http://www.asianjde.com/

Introduction

Presence is not simply a straightforward term referring either to the situation of finding oneself physically in a specific place, or to the fact of being there for someone, to keep them company or help them if they have problems. Nor is it automatically the opposite of physical (or mental) absence. It may also take several forms: educational, social, interpersonal, psychological, etc. It should therefore be thought of in the plural rather than in the singular. In any case, presence is far more complex that it may seem at first. Each of the forms it takes constitutes a specific research area. The scientific issue is therefore to make it intelligible, or, in other words, to give it a theoretical framework for analysis and interpretation.

The Model of Social Presence in e-learning (MSP- elearning) (Jézégou, 2022, 2023) helps respond to this issue, while offering points of reference for both research and engineering. *"Being and doing together to learn with and from others"* sums up fairly well the focus of this model. To develop this further involves taking account of an observation. Since the 2010s, many e-learning operators (businesses, training organisers, higher education establishments, schools, etc.) have increased their efforts to design and implement training that is delivered entirely remotely. The trend is essentially to go for multimedia educational engineering dedicated to designing digital resources, integrating and adapting a platform or remote mentoring. Generally speaking, the learning situations proposed are above all individual, thereby sidelining collective activities which may, however, also be sources of learning. Furthermore, there is still a way to go before we can consider e-learning as a learning experience of solidarity, achieved through interpersonal or group presence. This is also one of the issues in this proposed model of French-speaking origin.

This model stands alongside other theoretical models. The best-known of which is *the model of Community of Inquiry in e-learning* (*COI model*). Another interesting one is the *Social presence model* (*PSM*) *in e-learning*. Each of these three models constitutes a resource for both research and for engineering social presence in e-learning. They have significant differences one from the other. This article presents the essential elements of the two first for the purposes of comparison and perspective. The MSP-elearning also has specific characteristics enabling it to be precisely differentiated. The reference situation of the model is that of a group of learners engaged in a collective activity *via* the use of socio-digital communication artefacts and with the support of a trainer (or an educator). Certain forms of mediated social interactions among group members create a social presence in e-learning. These interactions are categorized into three types, each corresponding to a specific form of presence: (1) socio-cognitive presence, (2) socio-affective presence, and (3) pedagogical presence. The article outlines the key aspects of the model: the definitions and the characteristics assigned to these three dimensions of social presence, the epistemological and theoretical foundations of the model, as well as it's functioning. Before examining the key aspects more closely, it also highlights an essential point: in this model, social presence is considered a specific form of 'remote presence'. As such, it has the five major properties also described in this article. They were formalised during the development of the model. As a theoretical framework, it requires validation through empirical studies. This article provides a summary of six significant studies conducted by French speaking researchers.

The theoretical model of social presence in e-learning (MSP - elearning) is relatively recent, having been published in its entirety in the early 2020s, but only in French (Jézégou, 2022, 2023). It offers broad prospects for empirical research. The dynamic back-and-forth between the main results obtained and the theoretical statements of the model will gradually make it possible to test its validity, and even its universality. So this model is a resource to be shared with the scientific community in the field, while going beyond the boundaries of the French-speaking world. This is one of the main aims of this article.

The five major properties of remote presence

A priori, the expression 'remote presence' carries within it a contradiction, at least if it refers to the fact of being "*here and now together and in the same place"* and therefore 'face-to-face'. 'Remote presence' then appears to be nonsense. But for people who are geographically distant, 'remote presence' acquires meaning through the relationship - interpersonal or group - which they maintain by using communication artefacts (email, instant messaging, discussion forums, video-conferences, etc.).

This 'remote presence' has five major properties (Jézégou, 2022). They also apply to *e-learning*, as well as to remote working or any other relational situation that is not in person, using digital information and communication technologies (NICTs). They are: (1) presence is the 'included middle' in the 'distance-proximity' dialogic pair; (2) it helps reduce the distance which separates and generates proximity between the speakers; (3) it is expressed in a socio-digital communication third location; (4) it implies two major conditions: the agency of the people in the relationship and the affordance of socio-digital communication artefacts; (5) is it real and not virtual, both lived and experienced.

Presence: the included middle of the 'distance-proximity' dialogic pair

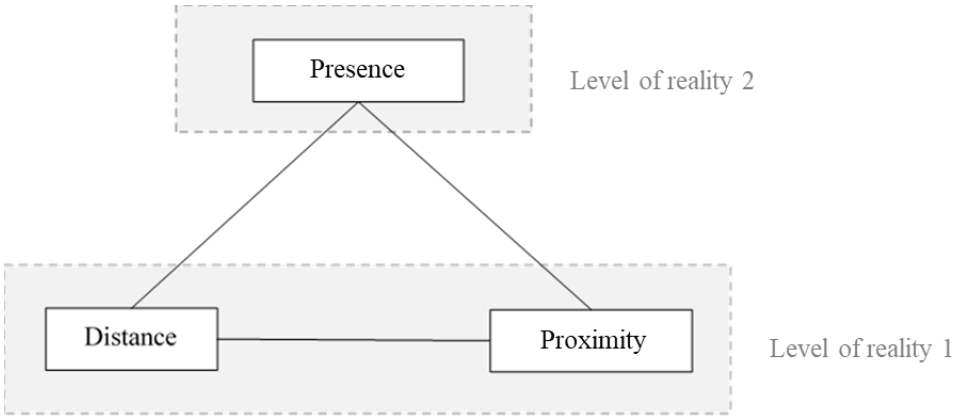
Presence is closely related to distance and proximity (Jézégou, 2019a). Generally speaking, these two notions are perceived to be in functional opposition: people are either distant or close. This opposition is promoted by classical logic. According to this logic, two contrary notions are necessarily mutually exclusive ('distance' *versus* 'proximity'; 'absence' *versus* 'presence'). It follows that no 'third' notion can link them, because they are in total opposition: this principle is known as the 'law of excluded middle'. Of course, distance and proximity have contrary, mutually exclusive, meanings, but they are also complementary: indeed, 'without distance, there is no proximity'; 'without proximity, there is no distance'. Moreover, they are also concurrent: according to the situation and at a given moment, one may override the other if it is considered the best option in the relationship established between the speakers. As they are antagonistic, complementary and also concurrent, the two notions are therefore dialogical in the sense given by Edgar Morin (1990). The logical dynamic of contradictions, initiated by Stéphane Lupsaco (1951), offers a complementary perspective to the 'distance-proximity' dialogic pair. Generally speaking, it represents an alternative to the logic of the 'excluded middle' in understanding opposites. Indeed, it establishes the principle by which there is a 'third' notion which makes it possible to link two dialogic notions, without however merging them. This notion is known as the 'included middle'. By considering presence as the included middle of the 'distance-proximity' dialogic pair, it acquires the status of a distinct entity which both links and reconciles the two notions. This status is embodied in the following formulation: presence enables distance to be reduced and proximity generated.

The influence of presence on distance and proximity

As an 'included middle', presence becomes a third route which expresses itself on a different level of reality from those of distance and proximity. For Stéphane Lupsaco, two levels of reality are different if, on passing from one to the other, there is a rupture in fundamental concepts, formalisations, representations, knowledge, laws or functioning.

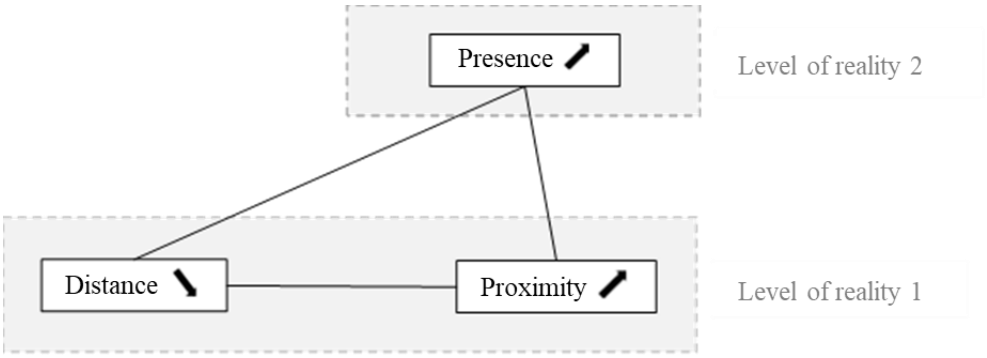
Therefore, presence, as the 'included middle' of the 'distance-proximity' dialogic pair may be positioned as follows:

Figure 1. The triangle of the 'included middle' of the 'distance-proximity' dialogic pair (Jézégou, 2022, p. 62)



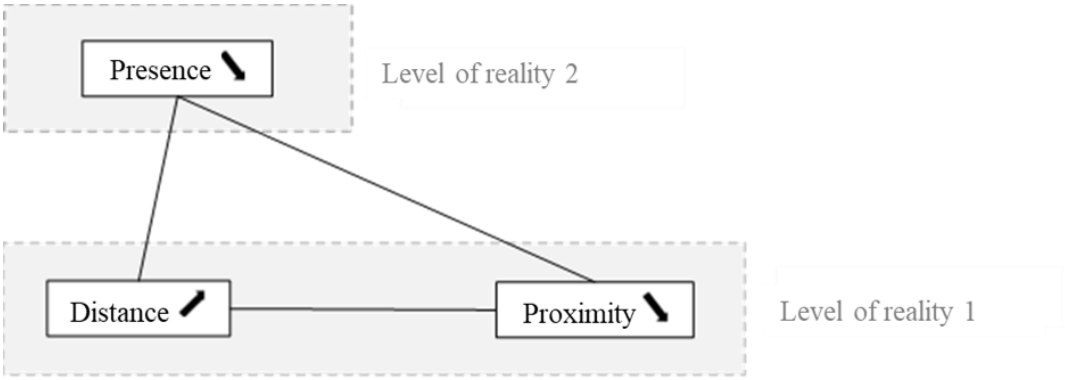
So, as presence increases, then distance decreases and proximity also increases (figure 2 below):

Figure 2. The influence of strong presence on distance and proximity (Jézégou, 2022, p. 65)



On the other hand, when presence decreases then distance increases and proximity also decreases (figure 3 below):

Figure 3. The influence of weak presence on distance and proximity (Jézégou, 2022, p. 65)



Reality level 2, which we are dealing with here, is that of a socio-digital communicative third location.

A presence located in a socio-digital communicative third location

A socio-digital communicative space may be assimilated with a 'third location' in the initial and founding sense given by Ray Oldenburg (1989).

Firstly, this is a location other than the one defined by the respective physical location of the speakers. In addition, it occupies a neutral position, because it is different from the place of work or home of either party. It also constitutes a clearly identifiable location with its own boundaries, as it has its own territoriality. Furthermore, this third location is constructed and developed on the basis of a dialogue, a cooperation and joint actions, thanks to the increasing possibilities for communication, collaboration, dissemination and sharing of content provided by NICTs. It is consequently jointly produced as a result of the interactive work of the participants. So, this third location which may be described as communicative 'socio-digital' constitutes a shared space. It comprises sociability, meetings, discussions, cooperation and multiple collaborations and, more broadly, social interactions which are broadcast. Finally, it is at one and the same time experienced as a place for practice and interrelations, cognitively represented and sensitively perceived at both individual and joint level.

The joint production of a communicative socio-digital third location involves '*doing and being together*' and, consequently, it being possible to create and develop a 'remote presence' within this third location.

The two essential conditions for creating remote presence

'Doing and being together' presupposes that the people who are geographically distant can show they have agency. In other words, they exercise intentional control over their own actions (Bandura, 2006), at both motivational and operational level. They therefore have the motivation to contribute to a joint activity. Both parties have a desire to develop their relationships with others. They are also willing to use socio-digital communicative artefacts, to persevere with established relationships and to carry out this activity, etc. At the same time, they put into practice strategies that are sufficiently effective not only for *doing together,* but also to develop a social-emotional climate that favours joint work (*being together*). Without such agency, at both individual and joint level, remote presence can neither be created nor developed.

To this condition of agency, we must add a second condition: that of the affordance of the socio-digital artefacts to establish relationships and interpersonal or group communication, share documents and collaborate or cooperate. As artefacts, they have no particular role to play: it all depends on how they are used. It is obvious that in order for a presence to be created, these artefacts must be activated (and therefore used) by potential speakers. This activation depends on the way they perceive both how easy they are to use and their usefulness for the task to be done (Davis, 1989). According to the case in hand, potential users either do or do not perceive all or some of the possibilities for action offered by each of these artefacts to, for example, communicate, collaborate/cooperate, store, etc. (Gaver, 1996, Ohlmann, 2006). When they can see these possibilities there is a high chance that they will use the artefact in question. All these aspects apply at individual level, but also at joint level (as a pair or in a group). Another aspect must also be taken into account: for the artefacts to be activated, both parties must be capable of using them. This means that they need to have digital communication and collaboration skills, and more broadly, a sufficient level of technological acculturation.

A subjective and objective presence, real and non-virtual

A person may experience the presence of their interlocutors in a metaphorical way, despite being physically separate from them. They experience this primarily by means of the interactions they have with others online in a communicative socio-digital third location. The objective framework of presence is different from this subjective measurement. Objective presence is therefore constructed 'by and in' activity taking place in this third location. It is consequently observable, tangible and brought into being

by actual practice. These two facets of presence co-exist and complement each other, while referencing two different worlds: on the one hand, an inner world full of feelings and imagination (‘*being here’, ‘being here together’*); on the other hand, a tangible world inherent in action (*‘doing things here’*, ‘*doing things here together’*). Furthermore, this presence is real and not virtual. It is expressed and developed within a socio-digital communicative third location made up of artefacts which together ensure its dematerialisation. It constitutes not only a location produced technically, but also and above all a location that broadcasts human activities (individual and collective) and social interactions making up a joint experience. This socio-digital third location is therefore very real, as is the presence expressed within it.

As previously mentioned, these properties were formalised during the development of the Social Presence Model in e-learning (SPM - elearning). Additionally, two other theoretical models deserve consideration: (1) the Community of Inquiry (CoI) model and (2) the Social Presence (SP) model in e-learning. While all three models address social presence, they differ significantly from one another.

The CoI and SP in e-learning Models

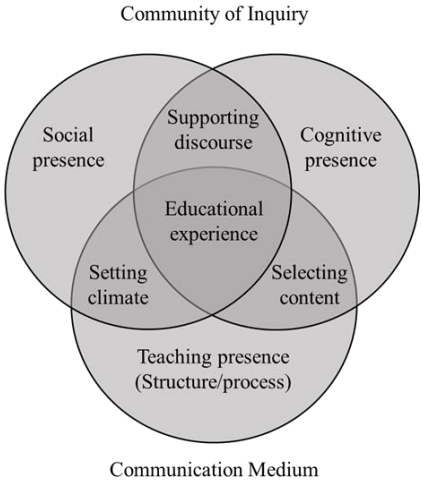
The most internationally recognised - and also the oldest - theoretical model of presence in e-learning is the "Community of Inquiry in e-learning" model. Developed between 1997-2001 and published by Randy Garrison and his English-speaking colleagues (Garrison & Anderson, 2003; Garrison, Anderson & Archer, 2010; Akyol & Garrison, 2013; Garrison, 2016, 2017), it has since been the focus of extensive research and numerous scientific publications, primarily in English on for over 25 years. As a result, the majority of contemporary studies concentrate on this model. During the 2010s, Aimee L. Whiteside (2015, 2017) proposed another interesting model: the "Social Presence in e-Learning" model. However, it remains far less well-known. This article highlights the essential elements of these models to offer a basis for comparison and perspective.

The model of community of inquiry (CoI) in e-learning

At epistemological and theoretical level, this famous theoretical model is based on the notion of community of inquiry from the philosophical approach of pragmatism initiated by John Dewey (1938). At the same time, it makes use of input from the historical and cultural approach of cognitive development (Vygotsky, 1934) as well as that of the theory of inquiry (Dewey). The major concepts underpinning this model are: educational experience, community, inquiry practice, dialogue, reflective thought and collaboration. Randy Garrison has presented several successive modellings of the COI model. They all aimed to put into perspective and articulate three particular forms of presence: cognitive, social and educational. Social presence is defined as follows: ‘social presence is the ability of participants to identify with a group, communicate openly in a trusting environment, and develop personal and affective relationships, by way of projecting their individual personality’ (Garrison, 2017, p. 25).

As stated by the author (2016, 2017), social presence is essential for the successful implementation of inquiry practice (Dewey, 1938) and for the emergence of a community of inquiry in e-learning, while at the same time promoting learning. This model is shown diagrammatically below:

Figure 4. The model of community of inquiry in e-learning: COI in e-learning (Garrison, 2016, p. 140)



Since the early 2000s, the Community of Inquiry (CoI) model in e-learning has faced numerous critiques, particularly regarding its conceptual robustness (Annand, 2011; 2019; Biocca, Harms & Burgoon, 2006; Jézégou, 2010; Kanuka, Liam & Laflamme, 2007; Kreijns & al., 2014; Morgan, 2011; Rourke & Kanuka, 2009; Sadaf & al., 2021; Xaczko & Ostendorf, 2023; Xin, 2012). All these authors have highlighted the lack of clarity in the model's epistemological and theoretical foundations. This weakness affects the empirical studies conducted based on the model. For instance, the cognitive presence indicators proposed by the model are not conceptually supported enough to be considered operational (Xaczko & Ostendorf, 2023). A similar critique has been voiced by David Annand (2019) and Annie Jézégou (2010) particularly regarding the impact of cognitive presence on what Randy Garrison refers to as "meaningful and deep learning". All emphasized the need to establish more solid foundations by clarifying the core concepts of the CoI model, particularly those of inquiry practice, critical thinking, collaboration, and the notion of self-direction, which is mentioned in the model but not further developed. While subsequent publications (Garrison, 2016, 2017; CoI, 2020) have provided some clarifications, they still fall short of conclusively demonstrating how a community of inquiry contributes to cognitive development.

A second fundamental critique of the CoI model in e-learning is expressed by authors such as Karel Kreijns & al. (2014) and Patrick Lowenthal & Chareen Snelson (2017). It concerns the hegemony the model exerts over the international scientific community in this field. According to these authors, this hegemony is so pervasive that it overshadows other serious and tangible frameworks for understanding presence in e-learning. This phenomenon can be explained, as noted by Pierre Paillé and Alex Mucchielli (2016), by the observation that "any major theoretical breakthrough is followed by a period of hegemony of the promoted theoretical model" (p. 132). Whether this hegemony is accepted or not, the authors argue that it is, in any case, time-limited if we compare it to the lifespan of a dominant paradigm as described by Thomas S. Kuhn (1962).

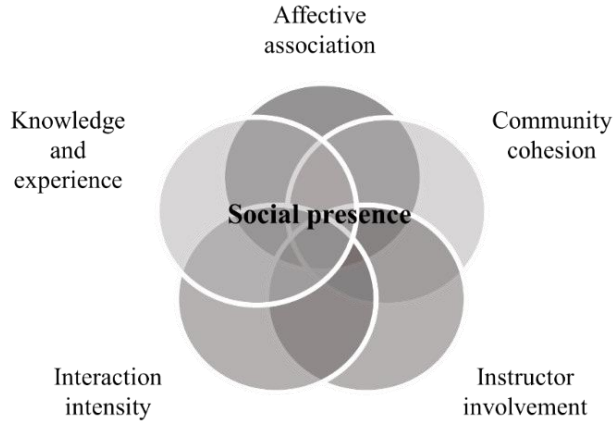
Nonetheless, despite these critiques of the CoI model, the work of Randy Garrison and his colleagues is extremely important. It has greatly contributed to the international recognition of presence in e-learning as a specific and established field of research. Their contributions have paved the way for numerous empirical studies and advanced e-learning research significantly.

The social presence model (SPM) in e-learning

Unlike the COI model, this theoretical model considers social presence to be a much greater meta-presence than an individual entity structured around other forms of presence, as is the case in the COI model. The unique characteristic of the SPM lies in the fact that it defines social presence as literacy. It is thereby understood from the point of view of self-confidence and the ability to interact with the help of verbal language, as well as to interpret, select and understand oral and written information and pass it on to others. SPM in e-learning attributes five aspects to social presence: affective association, community cohesion, instructor involvement, interaction intensity, experience and knowledge. On the

theoretical level, this model is founded on the socio-cultural approach of cognitive development. It is heavily supported by the concept of the zone of proximal development. Aimee L. Whiteside expresses this diagrammatically below:

Figure 5. The social presence model in e-learning: SPM (Whiteside, 2017, p. 136)



By drawing on the two major concepts of inner speech and the Zone of Proximal Development (ZPD), Aimee L. Whiteside grounds the Social Presence Model in the socio-constructivist perspective of cognitive development initiated by Vygotsky. However, the author does not provide extensive arguments about the contribution of each of these concepts or their integration within the proposed theoretical model, despite positioning them as foundational. She also does not further elaborate on the effects of social presence, understood as a specific literacy, on the effectiveness of online learning. Although this model represent an interesting alternative to the CoI model, it has not has not yet received the recognition it deserves.

The model of social presence in e-learning (MSP- elearning) is more recent than these two theoretical models. To a greater extent than the COI and SP Models, it locates social presence in the register of a relational dynamic, both of a group nature and mediatised. It shares with the *SDM* an approach that treats social presence as a meta-presence. In addition, it attributes to social presence, as a version of remote presence, the five properties previously highlighted. The epistemological and theoretical foundations of this model are different from those produced by Randy Garrison and Aimee L. Whiteside.

The model of social presence in e-learning : MSP- elearning

In this model (Jézégou, 2022, 2023), social presence in e-learning is considered as a specific form of remote presence. At such, it has the five major properties described above. It refers to '*being and doing together to learn with and from others'*, despite geographical distance and *via* the use of socio-digital communication artefacts. Social presence results from the synergy of certain forms of social interactions between the learners, and between them and the trainer (or the educator) when they are carrying out a group activity entirely remotely. These specific forms of interaction define the shape as well as the content of the three dimensions of social presence: that is, socio-cognitive, socio-affective and pedagogical presences. These three dimensions therefore make up social presence: that is why it is understood as a meta-concept.

The main aspects of this theoretical model

Like the COI and SD Models in e-learning, this model has its roots in the socio-constructivism of cognitive development, but it does not make reference to the historical/cultural approach of Vygotsky (1934). It is based on the theory of socio-cognitive conflict (Darnon, Butera & Mugny, 2008; Perret-Clermont & Nicolet, 2002). It is also grounded in philosophical movement of pragmatism initiated by John Dewey (1938), particularly in the transactional perspective of action developed by this author with

Arthur F. Bentley (1949). It integrates the concept of inquiry practice (Dewey): Inquiry practice is a collective working based on collaboration and on a specific process of resolving a problematic situation. The expression 'problematic situation' may denote a project to be led, a solution to be sought for a problem, a response to an unexpected event or a new activity to be undertaken. The psychosocial theory of group dynamics (Festinger, 1954; Lewin, 1948; Maisonneuve, 1968) is also a major contribution to the model's foundations.

The architecture of the model of social presence in e-learning (MSP e-learning) is underpinned by various key concepts: social interactions, the socio-cognitive conflict, communicative transactions, inquiry practice, contradictory collaboration, the socio-affective climate, group tutoring and the online learning community. It also includes the concepts of agency, socio-digital affordance.

This is the definition given to each of the three dimensions of social presence in e-learning:

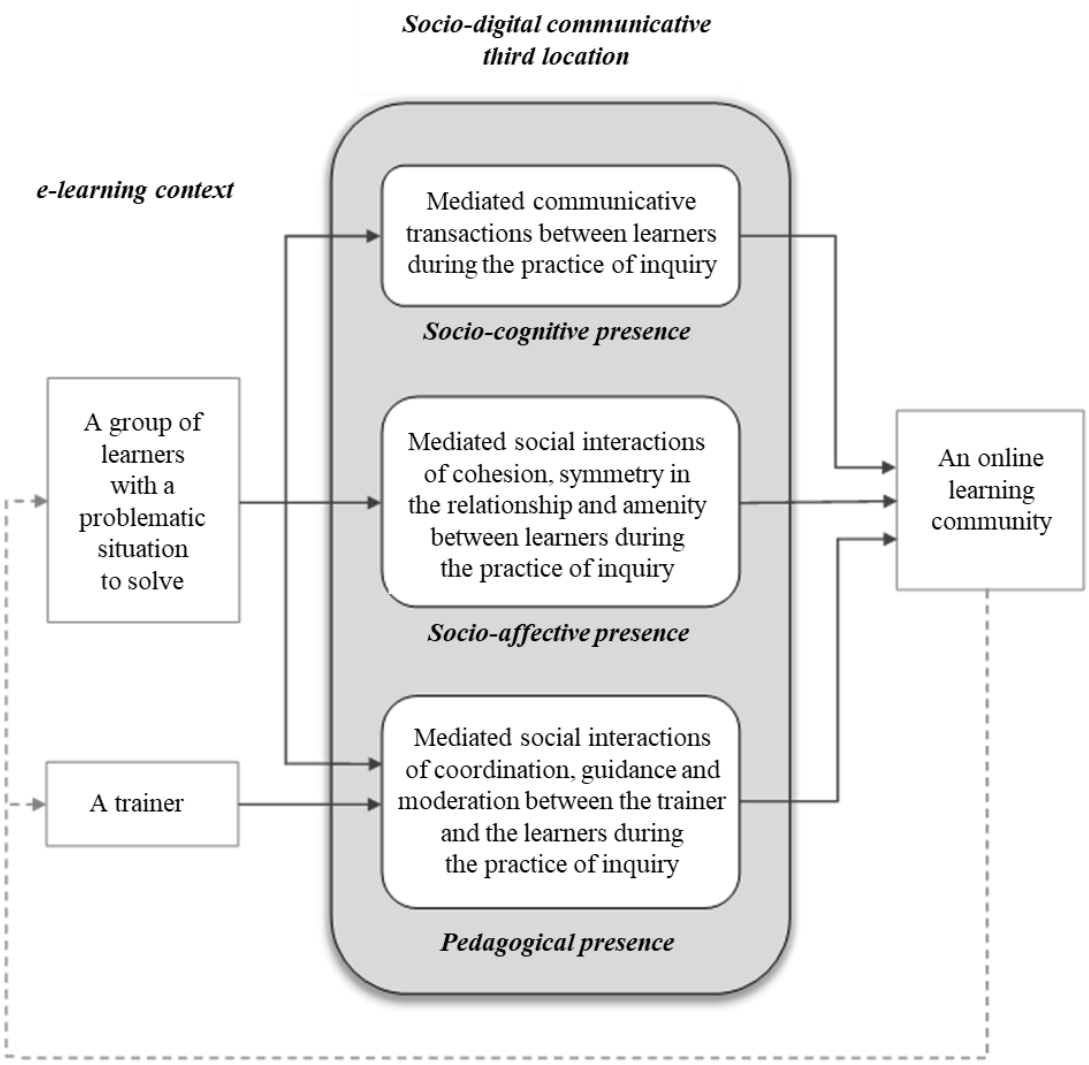
- Socio-cognitive presence in e-learning results from mediated communicative transactions between the learners during a group activity aimed at resolving a problematic situation by practice of inquiry. Communicative transactions are social interactions to express and confront points of view, mutual adjustments, negotiations, deliberations and decisions. It contributes to the development of an online learning community (Jézégou, 2022, p. 172).

- Socio-affective presence in e-learning results from mediated social interactions of cohesion, symmetry in the relationship and amenity between the learners during a group activity aimed at resolving a problematic situation by practice of inquiry. It contributes to the development of an online learning community (Jézégou, 2022, p.184)

- Pedagogical presence in e-learning results from mediated social interactions between the trainer and the learners during a group activity aimed at resolving a problematic situation by practice of inquiry. These social interactions become apparent during the trainer's own activities in coordinating, guiding and moderating the learners in the group. It contributes to the development of an online learning community (Jézégou, 2022, p. 196)

The socio-cognitive, socio-affective and pedagogical presences are expressed, independently or together, in a socio-digital communication third location. Each contributes to the development of an online community, while promoting learning at both individual and collective level. The community thus formed exerts, in turn, an effect on the process of "*being and doing together to learn with and from others*". These effects may alter, for example, the agency of each of the members of the group or of the group itself, their skills in working collaboratively and cohesively, their ability to work together to resolve a problem, or their relations with others (symmetry of relationship and amenity). The trainer may therefore experience reactions to their own interventions (coordinating, guiding, moderating) from the group or concerning the degree of pedagogical presence to be used. Generally speaking, socio-affective presence supports the socio-cognitive presence resulting from these transactions. Furthermore, the pedagogical presence of the trainer aims to promote these two dimensions of presence. Nevertheless, the support provided is not automatic, and its influence may be limited. In this way, depending on the context or even the group profile, these three dimensions of social presence in e-learning may manifest independently regardless of this. The MSP- elearning is shown diagrammatically as follows (figure 6 below):

Figure 6. The model of social presence in e-learning (MSP- elearning) (Jézégou, 2022, p. 209)



After outlining the main and specific aspects of this theoretical model, it is important to introduce the different categories of mediated social interactions leading each of the three dimensions of social presence in e-learning.

The categories of mediated social interactions leading socio-cognitive, socio-affective and pedagogical presences

As mentioned above, socio-cognitive, socio-affective, and pedagogical presences result from certain forms - or categories - of mediated social interaction between the learners in the group (for the first two), and between these learners and the teacher (for the third).

Socio-cognitive presence in e-learning results from mediated communicative transactions between the learners during a group activity. Communicative transactions are social interactions to express and confront points of view, mutual adjustments, negotiations, deliberations and decisions. According to John Dewey and Arthur F. Bentley (1949), these transactions promote both individual and collective learning while strengthening the group. The socio-cognitive conflict theory further explains that it is particularly the confrontation of each individual's viewpoints that allows for learning about oneself, others, and the acquisition of new knowledge.

Table 1. Six categories of mediated communicative transactions leading to socio-cognitive presence (Jézégou, 2022, p. 183).

	Six categories of mediated communicative transactions leading to socio-cognitive presence
Mediated communicative transactions	expression of each of the learner's points of view
	confronting the points of view expressed
	mutual adjustments between learners
	negotiations between learners
	deliberations between learners
	group's decision

These six categories are present in each of the four phases of the practice of inquiry (Dewey, 1938): the phases of defining the problematic situation and formulating a hypothesis for resolution, followed by the phases of testing this hypothesis and evaluation. Together, these categories encompass 11 interaction indicators (Androwkha & Jézégou, 2019).

Socio-affective presence is conceptually more complex. It results from mediated social interactions of cohesion, symmetry in the relationship and amenity between the learners during a group activity. According to the psychosocial theory of group dynamics, these three forms of interaction promote "*being together*" and, even more so, "*well-being together*" in order to "*do together*." The theory of socio-cognitive conflict also confirms this (Darnon, Butera & Mugny, 2008; Mugny & al., 2003), while specifying that they contribute to the development of learning. Relying primarily on this theory of group dynamics initiated by Kurt Lewin (1948) and based on the study of key authors in this field (Bateson, 1979; Festinger, 1950; Janis, 1972; Maisonneuve, 1968; Moscovici, 1979), several factors conducive to these three fundamental forms emerge. These factors are associated with eight specific categories of mediated social interactions, as shown in the table 2 below.

Table 2. Eight categories of mediated communicative transactions leading to socio-cognitive presence (Jézégou, 2022, p. 195)

Eight categories of mediated communicative interactions leading to socio-affective presence	
Cohesion	
Mediated social interactions which reveal	reaction of a group of learners to a potential external threat, to inter-group competition, to intra-groupe competition
	group satisfaction at socio-operational and relational level
	group attraction to the activity to be undertaken, or to the group itself
	a relational norm open to difference and diversity within the group
	democratic leadership within the group
Symmetry of relationship and amenity	
Mediated social interactions which reveal	an equal relationship between the members of the group
	mutual respect, consideration, appreciation of others
	politeness, kindness, friendliness within the group

Together, these eight categories include 21 interaction indicators: 13 indicators reflect social interactions related to cohesion, four relate to symmetry of relationship, and four pertain to amenity (Jézégou, 2022; Jézégou, Zhao & Déro, 2024).

Pedagogical presence in e-learning results from mediated social interactions of coordination, guidance and moderation between the trainer and the learners during a group activity. The identification of these three categories of interactions results from the study of foundational works on helping relationships in education (Freire, 1967; Labelle, 1996; Rogers, 1969), as well as on group tutoring (Dillenbourg, 2011; Quintin, 2011).

Table 3. Three Categories of mediated social interactions leading to pedagogical presence (Jézégou, 2022, p. 207).

Three categories of mediated social interactions leading to pedagogical presence	
Mediated social interactions for :	helping with the organisational and methodological coordination of the group of learners
	guiding the pedagogical and socio-affective development of the group
	moderating the socio-affective aspects within the group

Together, these three categories include 19 interaction indicators: seven indicators reflect social interactions related to coordinating the organizational and methodological aspects of group work; nine relate to pedagogical guidance, and three pertain to moderation (Jézégou, 2022).

Several empirical studies have been conducted in recent years in France using both the model statements and the categories (and indicators) of mediated social interactions mentioned above. To date, they mainly focus on socio-affective presence and socio-cognitive presence.

Some empirical researches linked to the model of social presence in e-learning MSP- elearning

A scale to measure socio-affective presence was developed in 2024 (Jézégou, Zhao, Déro, 2024), called the "*Échelle de Mesure de la Présence Sociale en e-learning*" (EMPSA e-learning) in French. It was designed using 21 indicators associated with the eight categories of mediated social interactions leading to socio-affective presence. The "cohesion" category included 13 items associated with social interactions expressing socio-operational satisfaction (7 items), those demonstrating group attractiveness (4 items), and interactions revealing an open relational norm (2 items). The "relational symmetry" category referred to social interactions indicating an egalitarian relationship (4 items), while the "amenity" category focused on social interactions characterized by politeness, kindness, cordiality, and sympathy (4 items). Thus, the initial questionnaire, based on a seven-point Likert scale, contained 21 items, each corresponding to a specific indicator. A series of exploratory and confirmatory factor analyses (n = 309) led to the elimination of seven items. Additionally, the results revealed a structure with three main factors, demonstrating strong internal consistency and validity. These three factors correspond to satisfaction (Factor 1, 6 items), attractiveness (Factor 2, 2 items), and relational symmetry and amenity (Factor 3, 6 items). The validated structure takes the form of a 14-item questionnaire with a seven-point Likert scale and no reverse-coded items. For the purposes of illustration, here are a few of the questions asked and their associated items: "During the remote work, the members of our group: "expressed satisfaction about being together," "conversed in a kind manner" "demonstrated open-mindedness regarding everyone's ideas and points of view". Possible answers on a 7-point Likert scale are as follows: "not at all," "very little," "a little," "moderately," "somewhat," "a lot" and "a great deal." This scale will be followed by a scale to measure socio-cognitive and pedagogical presence.

A questionnaire survey was conducted among students (n = 338) who, at the time of the empirical study (Jézégou & Zhao, 2024), were training for careers in adult education through Master's programs offered entirely online by three French Universities. One of the specificities of these university programs is that they encourage students to participate in group work using socio-digital communication artefacts. This research had a main objective: to test four theoretical hypotheses related to socio-affective presence in e-Learning, while relying on the "*EMPSA e-learning*" measurement scale. First of all, the results of the statistical processing of the responses to the questionnaire confirmed the validity and reliability of the psychometric properties of the scale. Then, they showed that (1) collaborative work mode, (2) democratic decision-making, as perceived by group members, had a positive effect on socio-affective presence. However, (3) Intra-group competition had a negative effect on socio-affective presence. This thee initial hypotheses were thus validated, but not the 4th. Thus, (4) intergroup competition had a negative effect on socio-affective presence, because social interactions of co-satisfaction and amenity, as perceived by the group members, were affected.

In addition, several qualitative empirical studies in French have been carried out. Four studies can be mentioned here. The first one focused on the socio-cognitive presence in e-learning (Androwkha & Jézégou, 2019). It aimed at identifying how the social interaction between teachers - carrying out a distance collective activity as part of a training program - created a socio-cognitive presence within a virtual class. This research was based on the indicator grid proposed by the model. The results show that the surfacing of a socio-cognitive presence, stemming from the transactions between these teachers, tended to be influenced by the very functioning of the group among which the collective activity is carried out. This functioning both depended upon the members' personal interest to get involved in the activity as well as factors linked to the group verbal and paraverbal transactions and actions.

The second qualitative research also focused on socio-cognitive presence in e-learning (Zhao, 2024a). Empirically, it was based on a "training experiment": sixteen Chinese and French students, geographically dispersed and divided into small groups, carried out a series of collective activities together using digital tools. The objective was to determine whether social interactions among the students generated a socio-cognitive presence. The results revealed that socio-cognitive presence, emerging from communicative transactions within the group, developed at varying levels among the constituted groups. This was influenced by several factors such as the volume and modes of interaction, the quality of relationships within the group, as well as cultural differences. Furthermore, the emergence and level of socio-cognitive presence within all the studied groups were closely linked to the agency of the students, both individually and collectively.

Like the two previous studies, the third was also aligned with and contributes to the model (Proust-Androwkha, 2020, 2022). Its objective was to understand how learners involved in an online training program perceived the presence of their peers as they interact with them in the context of completing collective activities in small groups. The data corpus consisted of thirty-six individual interviews. Thirty learners, from two cohorts participating in the same online training program, took part in the study. Initially, two quantitative analyses using statistical treatment of qualitative data provided an overview of the vocabulary present in the learners' discourse. The results of these analyses highlight the importance that these learners attached to the socio-affective dimension of peer interactions. Subsequently, three qualitative analyses, conducted using conceptual categories, deepened the understanding of the socio-affective dimension of peer interactions and ultimately contribute to the conceptualisation of socio-affective presence in online training. These findings underscore the significance of self-recognition by others, relational intimacy, a secure social environment, and a sense of community in fostering an interactional dynamic and, consequently, socio-affective presence.

Another research research (Bebbouchi & Jézégou, 2023), both quantitative and qualitative, aimed to study spontaneous mutual aid behaviors of adult students engaged in an e-learning environment. In particular, it examined whether the feeling of belonging to a group exerted an influence on these aid behaviours. The other objective, linked to the previous one, was to verify whether such behaviours had an influence on students' degree of self-determination to training. The results show that, for these students, the feeling of belonging to a group served as a motivational lever to develop helping behaviors primarily based on altruism and comfort. These altruim and comfort behaviours constituted, in turn, motivational support to continue in training. They were particularly manifested through their mediated social interactions of group cohesion and relational symmetry.

Based on these initial empirical studies, the model of social presence in e-learning (SPM - elearning) appears to be sufficiently stable and operational, both in terms of its conceptual foundations and the proposed indicators. Further studies will help confirm (or not) this first diagnosis. To date, three researches are in progress. One focuses on socio-affective presence within several groups of nursing students in the context of hybrid training (Maury-Zing, 2024) . The other examines the socio-cognitive and socio-affective presences that emerge in informal online groups of women business leaders and how these presences contribute to the development of a online learning community (El Keffi, 2025). Another study is to determine whether a socio-cognitive presence and a socio-affective presence emerge within groups composed of Chinese and French students engaged in distance activities, each student being in his or her respective country. It also seeks to understand the potential impacts of these presences on perceptions of self and others, on cultural stereotypes. (Zhao & Jézégou, 2024; Zhao, 2024b, 2024c). To date, the development and validation of a measurement scale for socio-cognitive presence and pedagogical presence are also underway. Further empirical research, particularly on pedagogical presence, is set to be launched soon.

Conclusion

Every effort to characterise, conceptualise and model social presence in e-learning - whatever the resulting theoretical model - aims to develop promising prospects for both research and engineering. The model of social presence in e-learning (MSP- elearning) contributes to this aim, while offering a threefold purpose: scientific, pragmatic and pedagogical.

At scientific level, the theoretical model opens up prospects for empirical research. The approach consists of successive iterations between theory and empirical studies to test the validity of its construct and, if possible, its universality. For researchers in the field, this model is a tangible work tool as well as a subject of scientific dialogue. It also has a pedagogical purpose: on the one hand, it enables researchers to identify what is covered by social presence as defined and characterised by this model, more specifically its five properties, its three dimensions and how the model fonctions; on the other hand, it offers a support for thinking about this presence, in a way that is underpinned and reasoned at a scientific level.

The model also has a pragmatic purpose, as it constitutes an aid to steer non-scientific action. It also constitutes a resource for engineering social presence in e-learning. It emphasizes the importance of "*doing and being together to learn with and from others*", despite geographical distance and through the use of socio-digital communication artefacts, while highlighting the fundamental challenge of creating social presence to promote both individual and collective learning. From this point of view, the aim is to encourage learning in a spirit of solidarity and to put solitary learning on the back burner. It is therefore important to practise engineering centred on relational, group and mediated dynamics. The approach consists of relying on definitions of the three dimensions of social presence, as well as on the categories and indicators of mediated social interactions that create socio-cognitive, socio-affective and pedagogical presences. In any case, developing social presence in e-learning requires both learners and the trainer to demonstrate agency, both individually and collectively. Furthermore, the artefacts must be sufficiently affordant to be used effectively by each individual and by the group as a whole. The proposed model thus constitutes a resource for such engineering of social presence in e-learning. It also provides the trainer (or educator) a tangible guidelines for ensuring a pedagogical presence with the group of learners by developing mediated social interactions of coordination, facilitation and moderation with its members.

Ultimately, this model is certainly a resource to be shared with the scientific community but also with practitioners in the field, while going beyond the boundaries of the French-speaking world. This article can also contribute to give it greater international visibility.

References

Androwkha, S., & Jézégou, A. (2019). Présence socio-cognitive lors d'une activité collective et à distance synchrone : une étude empirique réalisée auprès de trois groupes d'enseignants en situation de formation. *Revue Internationale en Pédagogie Universitaire, 16*(3), 22-38. https://www.ritpu.ca/ritpu/files/numeros/98/ritpu-v16n3-02.pdf

Annand, D. (2011). Social presence within the community of inquiry framework. *International Review of Research in Open and Distance Learning*, *12*(5), 38-54.

Annand, D. (2019). Limitations of the Community of Inquiry Framework. *International Journal of E-Learning & Distance Education. Revue Internationale du E-Learning et de La Formation à Distance*, *34*(2). https://www.ijede.ca/index.php/jde/article/view/1133/1745

Akyol, Z., & Garrison, D. R. (2013). *Educational Communities of Inquiry: Theoretical Framework, Research and Practice*. IGI Global

Bandura, A. (2006). Toward a Psychology of Human Agency. *Perspectives on Psychological Sciences, 1*(2), 164-179. https://doi.org/10.1111/j.1745-6916.2006.00011.x

Bateson, G. (1979). *Mind and Nature: À Necessary Unit.* Dutton.

Bebbouchi, D., & Jézégou, A. (2022). L'entraide d'étudiants dans l'apprentissage en ligne : le rôle joué par le sentiment d'appartenance à un groupe et par l'autodétermination de la motivation. *Revue Internationale des Technologies et Pédagogie Universitaire (RIPTU)*, *19*(1), p. 1-17, https://www.ijthe.org/fr/articles/view/487

Biocca, F., Harms, C., & Burgoon, J. (2006). Towards a more robust theory and mesure of social presence: Review and suggested criteria. *Presence: Teleoperators & virtual environments*, *12*(5), 456-480.

CoI. (2020). Community of Inquiry website. https://coi.athabascau.ca/coi-model/

Darnon, C., Butera, F., & Mugny, G. (2008). *Des conflits pour apprendre*. Presses Universitaires de Grenoble.

Dewey, J. (1938). *Logic. The Theory of Inquiry.* New York Henry Holt and Company

Dewey, J., & Bentley, A. F. (1949). Knowing and the known. In A. Boydston, *John Dewey: the later works. 1925 - 1953* (vol. 16). Southern Illinois University Press.

Dillenbourg, P. (2011). Pour une conception intégrée du tutorat de groupe. Dans C. Depover & *al.* (dir.), *Le tutorat en formation à distance* (p. 171-194). De Boeck.

El Keffi. S. (2025). Présence à distance et communauté en ligne. *Séminaire CIREL*. France.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7,* 117-140.

Freire, P. (1967). *L'éducation : pédagogie de la liberté.* Cerf.

Jézégou, A. (2010). Community of Inquiry in E-learning: A Critical Analysis of Garrison and Anderson Model. *Journal of Distance Education / Revue de l'Éducation à Distance*, *24*(3), 1-18. http://www.jofde.ca/index.php/jde/article/view/707

Jézégou, A. (2019a). La distance, la proximité et la présence en e-Formation. Dans A. Jézégou (dir.), *Traité de la e-Formation des adultes* (p. 143-163). De Boeck.

Jézégou, A. (2019b). L'agentivité humaine et e-Formation des adultes. Dans A. Jézégou (dir.), *Traité de la e-Formation des adultes* (p. 191-232). De Boeck.

Jézégou, A. (2022). *La présence à distance en e-Formation. Enjeux et repères pour la recherche et l'ingénierie*. Presses Universitaires du Septention.

Jézégou, A. (2023). La présence comme levier pour les apprentissages en groupe et en distanciel : quelles propriétés et quels modèles théoriques ? *Distances et Médiations des Savoirs, 42*. https://doi.org/10.4000/dms.9169

Jézégou, A., Zhao, Y., & Déro, M. (2024). La présence socio-affective en e-Formation : l'élaboration et la validation de l'échelle d'une mesure. *XVIIIe Rencontres du Réseau International Francophone de Recherche en Education et en Formation,* Suisse. https://shs.hal.science/halshs-04879218

Garrison, D.R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text based environment: computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105.

Garrison, D. R., & Anderson, T. (2003). *E-learning in the 21st Century. A Framework for Research and Practice.* Routledge.

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education, 13*(1-2), 5-9.

Garrison, D. R. (2016). *Thinking Collaboratively. Learning in a Community of Inquiry*. Routledge/Taylor and Francis. https://doi.org/10.4324/9781315740751

Garrison, D. R. (2017). *E-Learning in the 21st Century: A Community of Inquiry Framework for Research and Practice* (3th eds.). Routledge/Taylor and Francis. https://doi.org/10.4324/9781315667263

Gaver, W. (1996). Affordances for interaction: The social is material for design. *Ecological Psychology*, *8*(2), 111-129.

Kanuka, H., Liam, R., & Laflamme, E. (2007). The influence of instructional methods on the quality of online discussion. *British Journal of Educational Technology*, *38*(2), 260-271.

Kreijns, F., Van Acker, F., Vermeulen, M., & Van Buuren, H. (2014). Community of inquiry: social presence revisited. *E-Learning and digital Media*, *11*(1), 5-18.

Kuhn, S.T. (1962). The structure of scientific revolutions. International Encyclopedia of Unified Science. Labelle, J.M. (1996). *La réciprocité educative*. Presses Universitaires de France.

Lowenthal, P.R. et Snelson, C. (2017). In search of a better understanding of social presence: an investigation into how researchers define social presence. *Distance Education*, *38*(2), 141-159.

Lewin, K. (1948). *Resolving social conflicts*. Harper and Brothers.

Lupasco, S. (1951). *Le principe d'antagonisme et la logique de l'énergie - Prolégomènes à une science de la contradiction.* Hermann.

Maisonneuve, J. (1968). *La dynamique des groupes*. Presses Universitaires de France.

Maury-Zing, C. (2024). Interactions sociales et travaux de groupe : étude des situations au sein d'un dispositif hybride de formation. *XVIIIe Rencontres du Réseau International Francophone de Recherche en Education et en Formation,* Suisse.

Morgan, T. (2011). Online classroom or community-in-the-making?: Instructor conceptualizations and teaching presence in international online contexts. *Journal of Distance Education, 25*(1), http://www.jofde.ca/index.php/jde/article/view/721/1269

Morin, E. (1990). *Introduction à la pensée complexe*. Seuil.

Moscovici, S. (1979). *Psychologie des minorités actives*. Presses Universitaires de Paris.

Ohlmann, T. (2006). Affordances et vicariances : contraintes et seuil. İn J. Baillé, *Du mot au concept* (p. 37-47). Presses Universitaires de Grenoble.

Oldenburg, R. (1989). *The Great Good Place: Cafés, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and how They Get You Through the Day*. Paragon House Publishers.

Paillé, P., & Muchielli, A. (2016). *L'analyse qualitative en sciences humaines et sociales* (4e éd.). Armand Colin.

Perret-Clermont, A. N., & Nicolet, M. (2002). *Interagir et connaître. Enjeux et régulations sociales dans le développement cognitif*. L'Harmattan.

Proust-Androwkha, S. (2020). Perception de présence des pairs dans le cadre de la réalisation d'activités collectives en groupe restreint et à distance. [Thèse de doctorat] Université de Lille.

Proust-Androwkha, S. (2022). Description de la mise en œuvre d'une démarche inductive pour caractériser les perceptions de présence des pairs-apprenants dans le cadre de la réalisation d'activités collectives à distance. *Distances et médiations des savoirs*, *38*, https://doi.org/10.4000/dms.7812

Quintin, J.-J. (2011). L'efficacité des modalités d'intervention tutorale et leurs effets sur le climat socio-relationnel des groupes restreints. Dans C. Depover & *al.* (dir.), *Le tutorat en formation à distance* (p. 62-86). De Boeck.

Rogers, C. (1969). *Freedom to learn*. Charles E. Merrill Publishing Company.

Rourke, L., & Kanuka, H. (2009). Learning in Communities of Inquiry: a review of the literature. *Journal of Distance Education*, *23*, 19-48.

Vygotsky, L.S. (1934). *Thought and language*. MIT Press.

Whiteside, A. L. (2015). Introducing the Social Presence Model to Explore Online and Blended Learning Experiences. *Online Learning: Official Journal of the Online Learning Consortium*, *19*(2). https://www.learntechlib.org/p/157861/

Witheside, A.L. (2017). Understanding social presence as a critical literacy. In A.L. Whiteside, A.G. Dikkers, & K. Swan. (Eds), *Social Presence in Online Learning: Multiple Perspectives on Practice and Research* (p. 133-142). Stylus Publishing. http://dx.doi.org/10.4324/9781003447023

Xaczko, E., & Ostendorf, A. (2023). Critical thinking in the community of inquiry framework: An analysis of the theoretical model and cognitive presence coding schemes. *Computers & Education*.

Zhao, Y., & Jézégou, A. (2024). Présence sociale en e-Formation et Représentations du Soi et de l'Autre. Le cas d'étudiants français et chinois réalisant ensemble des activités collectives à distance. *Colloque Agi-lang : Agentivité, engagement et apprentissage en (didactique des) langues dans des contextes numériques.* France. https://hal.science/hal-04649928

Zhao, Y. (2024a). Présences socio-cognitive en e-Formation : le cas d'étudiants français et chinois réalisant ensemble des activités collectives à distance. *XVIIIe Rencontres du Réseau International Francophone de Recherche en Education et en Formation*, Suisse.

Zhao, Y. (2024b). Présence sociale à distance et son impact potentiel sur les stéréotypes au sein de groupes restreints d'étudiants français et chinois lors d'activités collaboratives en e-formation interculturelle. *XVIIIe Rencontres du Réseau International Francophone de Recherche en Education et en Formation,* Suisse. https://hal.science/hal-04649956

Zhao, Y. (2024c). Présence Sociale en e-Formation et Apprentissage Interculturel : Étudiants Chinois et Français Apprenant Avec et Par les Autres lors de la Réalisation des Activités Collectives à Distance. *Colloque CIDEF : Apprendre avec et par les autres en éducation et formation*, France.

Xin, C. (2012). A critique of the community of inquiry framework. *Journal of Distance Education. 26*(1). http://www.ijede.ca/index.php/jde/article/view/755

Please do not remove the following sections. These sections will be copied from the Title Page if your article is accepted.

About the Author

Annie Jézégou; University of Lille, France, annie.jezegou@univ-lille.fr, https://orcid.org/0000-0003-3850-9446

Author

Conceptualization, Formal Analysis, Investigation, Writing – original draft, Writing – review & editing.

Data Accessibility Statement

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

Ethics and Consent

An ethics review was not applicable.

Competing Interests

The author has no competing interests to declare.

Article History

Received: October 18, 2024 – Accepted: January 12, 2025.

Suggested citation:
Jézégou, A. (2025). Doing and being together to learn with and from others in e-learning: The Theoretical Model of Social Presence in e-Learning: MSP- elearning. *Asian Journal of Distance Education, 20*(1), 76-93. https://doi.org/10.5281/zenodo.14635232