Sharing Responsibility for Learning: Understanding Interactions in an Algerian Peer-Based Learning Community

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Abstract

The importance of online peer learning (PL) and interaction in building students' sense of community is well recognised in the literature and it is even becoming increasingly relevant because of the substantial change in instruction as a result of the COVID-19 pandemic. However, there is a lack of research describing students' experience of peer interaction and their perception of community in an online synchronous environment. To address this gap, this research, using a qualitative case study analysis, examined students' perception of their interactions, how and why they engaged in a synchronous peer discussion, and how their peer interaction experiences influenced their learning and sense of community.

The research setting is two Algerian master's distance learning programmes, Applied Linguistics and Local Administration. While the MOODLE platform used by both programmes to deliver the course content offered online interactional spaces with opportunities only for text-based communication, it was expected that the use of the Skype software, that was widely used in Algeria, would provide an interactive learning platform where students are able to form a peer-based learning community and exchange immediate feedback without the involvement of a teacher. Challenges for synchronous peer interaction, the value of peer group interaction, and the impact of the synchronous environment on learning and sense of community emerged as key findings to understand the contribution of synchronous PL to the students' overall distance learning experience. Data also suggested that developing a more robust community was hindered by sociocultural issues, such as not using the webcam despite showing readiness to engage in audio-visual PL practice and doubting the correctness of some answers because of the absence of the teacher's evaluation. Although the two groups showed some differences in the nature and level of the interaction taking place in the Skype PL sessions, they also showed some similarities in the dynamics of interaction that were further explored using Garrison and his colleagues' (2010) Community of Inquiry (CoI) framework and based on these findings, this study suggests a model of online synchronous PL.

The need for such research is apparent as the focus on online pedagogical strategies continues to increase as well as the exposure levels to the online and distance modes of study by a varied group of students. Hence, the findings indicate implications for online distance learning pedagogy including the application of online PL and the CoI framework.

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List of Accompanying Material

The PowerPoint slides and the word document used to provide participants with guidelines and recommendations based on literature for an effective Skype peer learning practice were uploaded to the following pages in Open Science Framework.

PowerPoint slides, private view-only link:

https://osf.io/fx8up/?view_only=fdd2b9311a034d878279fb9f52cf0a88

Translated copy of PowerPoint slides, private view-only link:

https://osf.io/fx8up/?view_only=fdd2b9311a034d878279fb9f52cf0a88

Word Document for the peer facilitators, private view-only link:

https://osf.io/fx8up/?view_only=fdd2b9311a034d878279fb9f52cf0a88

Translated copy of the Word document, private view-only link:

https://osf.io/fx8up/?view_only=fdd2b9311a034d878279fb9f52cf0a88

List of Acronyms and Abbreviations

ADSL   Asymmetric Digital Subscriber Line

ARN   Academic Research Network

AVUNET   Algerian Virtual University Network Equipment Technologies

CMC   Computer-Mediated Communication

CoI   Community of Inquiry

COVID-19   Corona Virus Disease 2019

DE   Distance Education

DL   Distance Learning

e.g.   For example

HE   Higher Education

ICT   Information Communication Technology

i.e.   That is

LMD   License-Master-Doctorate

MENA   Middle East North Africa

MHESR   Ministry of Higher Education and Scientific Research

MOODLE   Modular Object-Oriented Dynamic Learning Environment

MP4   Digital Multimedia Container Format

NCDVE   National Centre of Distance Vocational Education

NCPL   National Centre for Public Learning

NOEDL   National Office of Education and Distance Learning

PDF   Portable Document Format

PF   Peer Facilitator

PhD   Doctor of Philosophy

PL   Peer Learning

p.m.   Post meridiem

STEM   Science, Technology, Engineering, and Math

UCE   University of Continuing Education

VoIP   Voice Internet Protocol

ZPD   Zone of Proximal Development

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Declaration

I, [Nihad Alem], declare that this thesis is a presentation of original work, and I am the sole author. This work has not previously been presented for an award at this, or any other, university. All sources are acknowledged as references. The work in this thesis has not previously been published except for the followings:

Alem, N. (2018). How Can We Understand the Learning That Takes Place in The Digital Era? Provoking a Discourse about Learning in the Digital Age. *Proceedings of Research Fora 26th International Conference*, 1-7. https://www.worldresearchlibrary.org/up_proc/pdf/1828-15385405561-7.pdf

Alem, N. (2019, December 12-13). *The Algerian Distance Learners' Perceptions of the Online Educational Experience of Peer Learning* [3-minutes presentation]. Open and Distance Education Conference, Rome, Italy.

Alem, N. (2020). Peer-to-Peer Interaction in a Real-time Distance Learning Environment: Challenges and Aspirations. *Proceedings of EdMedia + Innovate Learning*, 768– 772. https://www.learntechlib.org/primary/p/217380/.

Chapter One: General Introduction

Delivering distance learning (DL) courses completely online has developed and expanded at an explosive rate as technology became readily and conveniently used to deliver instructions to students who cannot physically attend regular classes. This education mode has even proved to be the best solution for continuing education during the COVID-19 pandemic. Online DL can however be an isolating experience, especially for adult students who are expected to be capable of learning independently. Studying online is perceived to be unfamiliar and challenging for this specific category of adult learners as they are not only required to interact with the content but also with the technology itself given that current DL courses use electronic materials delivered online through institutional platforms that are often referred to as learning management systems which comprise multimedia materials and offer a space for students to interact with each other and with their teachers as well. While some of the materials and discussions that require mandatory participation are designed for assessment purposes, other materials and interactive spaces in the online environments serve as sources of support.

Students opt for DL because of the freedom and flexibility that its study mode offers; however, this can also contribute to increased feelings of isolation and lack of engagement. On the other hand, online synchronous environments can offer opportunities for immediate interaction and help students collaborate and construct meaning especially when the learning content and materials are perceived to be challenging. Immediacy is portrayed by literature as important to successful online learning as it is to face to face, and that synchronous communication, "particularly richer-cue channels such as video conferencing, can enhance perceptions of immediacy and lead to an increased sense of interpersonal connection to both instructors and students in online classes" (Markman & Stallings, 2014, p.10). Hence, this research project is an attempt to explore the nature and effects of peer learning (PL) and interaction on students' DL experience when implemented in an online synchronous learning environment with two peer groups, namely, master's in Applied Linguistics and master's in Local Administration. Most students involved in these two-year Algerian master's programmes offered at distance are workers and have no experience in online and DL. This unfamiliarity with the study mode, coupled with concerns about the perceived academic and technical challenges of these programmes, denote that several students face difficulties in coping with them. Thus, by having the opportunity to participate in synchronous peer group discussions, students can have greater support for their learning similar to in-person peer assistance available to students studying on campus and gain an avenue for receiving instant peer support. Additionally, undertaking these sessions would enable the researcher to gain a better understanding of the affordances that

online verbal peer learning can provide to assist distance students in sharing responsibility for learning through participating in meaningful interactions and successfully completing their programme.

This initial chapter aims at introducing this study by first discussing its background to provide a foundational understanding and showcase the need for such research (Section 1.1) and then, the research question coupled with the aims of the study (Section 1.2), and the research design (Section 1.3) are outlined. Section 1.4 presents the significance of this study and the contribution it offers to the body of knowledge in this field followed by an overview of its phases in Section 1.5 and the structure of the thesis in Section 1.6. The chapter then ends with a brief summary presented in Section 1.7.

1.1 Background

Distance education (DE) in the Algerian context has gained the attention of policymakers because of the increase in the number of students and their unique needs, particularly students in geographically isolated areas and those who are unable to move, including workers or people with reduced mobility to continue their studies (Akmoun & Ouahib, 2020; Bouachour, 2018). The pedagogical value, advantages and possibilities of online DE have continued to be reviewed even more due to the Coronavirus pandemic that has added new dimensions of needs in terms of planning and management of online DE (Blizak et al., 2020). This research is, therefore, motivated by interesting challenges arising from the growing popularity of DE in the Algerian context including the surface innovation coupled with the use of non-interactive media, and focus on the knowledge to be learned rather than the student-centred conception of education. Additional motivation came from the limited research in the field of Algerian distance HE and the wish to explore what if distance learners take the responsibility to direct the learning of each other and learn from one another in an online environment that emulates a real classroom.

Algeria was one of the Arab countries adopting DE by initiating the university of continuing education in 1990 (Abd Elhay, 2010). Another recent initiative was the master's DE which was employed formally in 5 Algerian universities. Each university was responsible for one of the following five specialisations: The field of law and political science, the field of economic sciences, the field of human and social sciences, and the field of literature and Arabic language (Akour & Hansali, 2020). In this, the DL strategy used by this master's DE initiative was reliant on providing students with courses online using the MOODLE-based system. MOODLE itself is an acronym for Modular Object-Oriented Dynamic Learning Environment, and it is also referred to as Course or Content Management System, and Virtual Learning Environment

(Pinner, 2014). Regardless the confounding names, this MOODLE platform is used in a wide variety of contexts however, the one used in the Algerian context (as shown in Figure 1.1) is marked by intensive written information and the absence of videos, audio and/ or visual interactive conversations as the communication takes only the text-based form through emails, discussion forums, and scheduled chats with teachers. These synchronous chats, in particular, are described by Akmoun and Ouahib (2020) as having limited use in the MOODLE platform and being dominated by student-instructor interaction and very little student-student and student-group exchange. Even in the discussion forums where interactions could be anytime and anywhere, student-student interaction remained low as evidenced by the number of replies shown in Figures 1.2 and 1.3. Therefore, it is of paramount importance to make concerted effort to promote student-student interaction in order to keep them socially and emotionally engaged with the learning community as studying alone may result in losing motivation not only to complete a given task but to complete the whole DL programme (Kim & Shih, 2003). Indeed, research indicates that distance students tend to be more engaged and motivated to learn in online learning environments that promote collaborative activities, effective feedback, and immediacy (Jacobi, 2018).
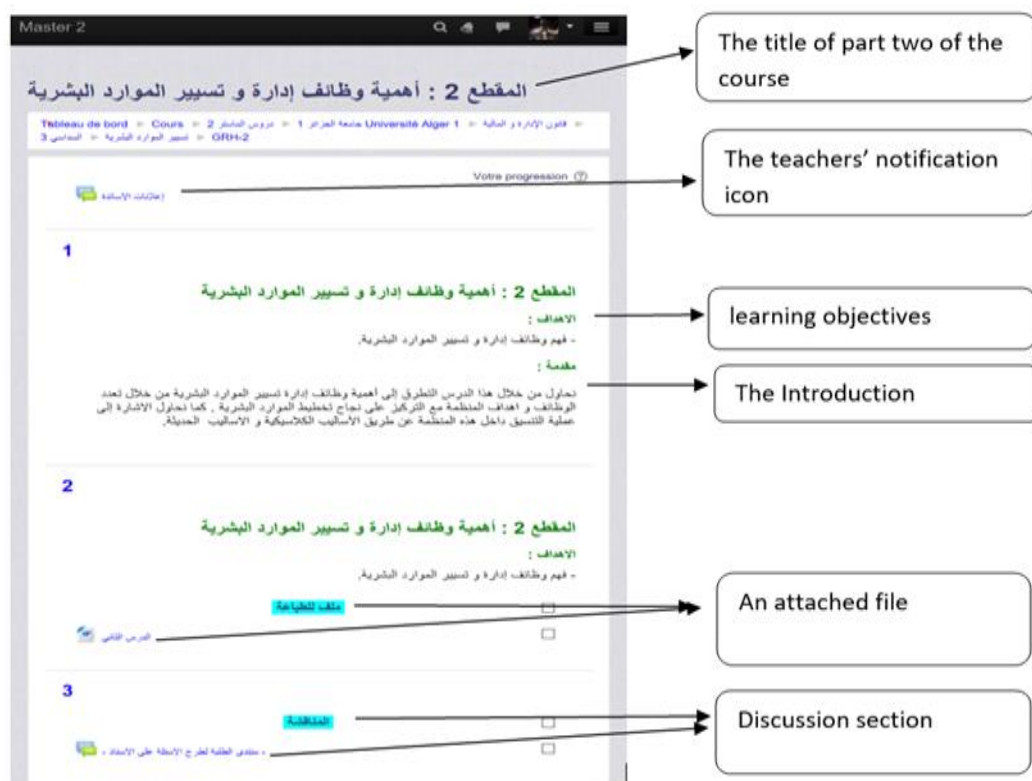
Figure 1.1 A lesson model posted on the online platform of the Local Administration DL programme
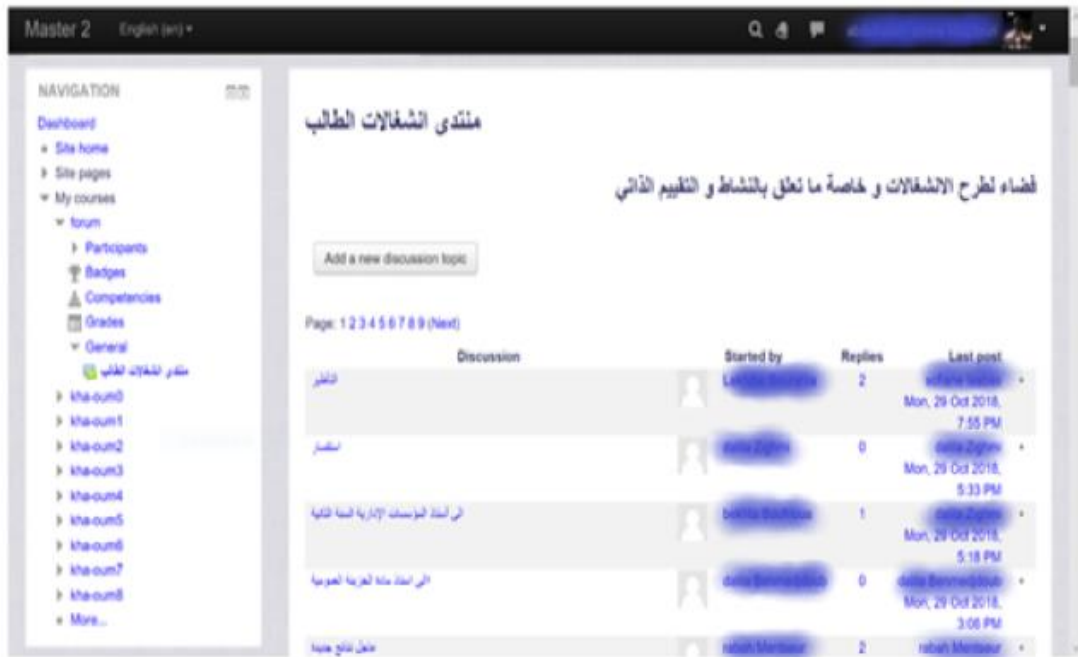
Figure 1.2 The discussion board used by teachers and students in the Local Administration programme

Figure 1.3 Students' discussion forum of the Applied Linguistics programme

By encouraging group interaction and sense of community in an online DL programme, students would be able to overcome feelings of disconnection and isolation thus leading to a more fruitful DL experience. In this regard, evidence suggests that learning from and with each other in both

formal and informal ways (Boud et al., 2001); i.e., PL, has the potential to foster collaborations, allowing students to become part of a learning community rather than stay distanced, as well as providing new perspectives on a particular issue or problem (Huijser & Kimmins, 2006); it also allows students to set the agenda and raise their concerns in an open, informal, and cooperative environment which is monitored by a trustworthy and approachable individual, alongside being "of value in adjusting to university, understanding course material, enhancing the ability to do well in assessed work and building confidence" (Capstick, 2004, p.48). In their study investigating PL in an online environment, the results of Huijser & Kimmins' s (2006) research indicate that distance students found it beneficial to speak with others having the same questions as well as asking spontaneous questions. For this latter, synchronous chat was found to be particularly suitable, where it is frequently these questions and instant responses that give students the confidence to move forward.

Hence, using synchronous video conferencing can help to maximise learning because of its affordances such as "visual cues, intonation, and immediacy that are commonly used in face-to-face dialogue to assist with making meaning" (Redmond & Lock, 2006, p.270) and which also has a lot of potential in addressing the challenges of online interactivity, especially for those specialising in humanities and social sciences, as they need to be engaged in a dialogic discourse where it is viable to scaffold the learning of discipline-specific concepts within a constructivist paradigm as well as to overcome the barrier of the perceived difficulty of the content, to collaboratively explore unfamiliar terminologies and make sense of what they have individually read unlike the flexible forum-type discussion groups that lack immediate feedback and often yield unsatisfactory depth of discussion and pitch of interaction or even text-based synchronous chats that are criticised for making students overwhelmed by the number of posts as the discussion progresses leading to shallow reading and a 'cut and paste' approach (Armitt et al., 2002; Chiu & Hew, 2018).

The development of video conferencing technology such as Google Meet and Zoom made it easy to create a synchronous space for communication; however, this research proposes the use of Skype on the Algerian master's distance learners for significant reasons, including affordability and cost-effectiveness, ease to use (Boland et al., 2021), and sustainability in that Skype has no licence or access restrictions and data are not going to be lost as opposed to the blackboard for instance in which there is a risk of losing accessibility once one is no longer a student at the operating institution, it also can be used on mobile phones which guarantees flexibility in learning, and most importantly, it has a pedagogical value in terms of developing a learning community (Parker et al., 2011) and promoting the online collaborative work

(Parra, 2013). Above all, the use of an equitable and appropriate medium is important as not every distance student has access to the latest technology (Huijser & Kimmins, 2006). Hence, the use of Skype in this study can be justified not only by the popularity of this software in the Algerian context but also by having a research agenda in PL practices. For example, in her mixed method study, Fleischmann (2014) has found that Skype facilitated the development of peer-to-peer collaborative environment, and it did not only provide a new way for students to work together but also promoted the social construction of knowledge through ongoing interaction around the problems discussed. Another qualitative study that evaluated Malaysian master's distance students' perceptions on the effectiveness of the Skype-based video conferencing also has found that the negative students' perceptions started to turn into positive towards the end of the synchronous DE classes due to the following factors: technical problems, time management, environments, and the number of participants (Ghazal et al., 2015).

While the perceived effectiveness of this technology in the Algerian context needs further investigation, the reported effectiveness of the synchronous video conferencing alongside the aforementioned indicators of the limited student-student interaction opportunities are some of the main motivators for developing interest in synchronous PL which, in addition to the support provided by the instructor, can give ample opportunity for distance students to engage with each other as well as the content and by doing so, we can develop a deep understanding of how this strategy operates and contributes to students' distance learning experience.

This study, therefore, employs an inquiry-based community-building perspective in exploring how "to make more structured and meaningful use of synchronous communications" (Armitt et al., 2002, p.1) through forming peer-led study groups made by students and for students using the Skype technology in order to fill the gap of the decreased student-student interaction and make students develop more ownership over their learning. Such perspective offers an insight into how a group of individual learners learns through an online educational experience that takes place at the intersection of three interdependent elements: social, cognitive, and teaching presence (Section 3.5) and whose interaction has been consistently demonstrated in the literature as producing a positive online learning experience for students (e.g. Kaul et al., 2018; Oyarzun et al., 2021). Hence, while most literature has adopted the grade-oriented approach to gauge the success of the PL strategy, this study focuses more on students' PL experiences that occur while creating "knowledge in action" (Lock & Redmond, 2006).

1.2 Research Focus and Aims of the Study

The overarching aim of the current research study is to investigate the added value and limitations of the synchronous PL environment and to what extent synchronous PL can contribute to the online learning experience when applied to the Algerian master's DE context. Specifically, it seeks to introduce, elaborate, and evaluate the educational experience of synchronous PL using three specific indicators: social, cognitive, and teaching presence. The reason behind suggesting this strategy is to encourage more collaborative and active learning, reach a high level of engagement, enhance a sense of community, and maximise the students' DL experience. Thus, an interactional space can be offered using Skype as a synchronous communication tool through which the PL experience can be mediated and then analysed based on the Community of Inquiry framework.

By exploring the processes of online PL synchronous sessions in two master's DL contexts (Applied Linguistics and Local Administration) at two different Algerian universities, this case study research is guided by the following overarching question: How does online synchronous PL contribute to the DL experience of the Algerian master's students?

Accordingly, the aims of this study were:

1. To describe the experience of interaction in the DL programme as perceived by students and teachers;

2. To investigate the students' readiness for the Skype peer learning discussions and what they introspect from this experience;

3. To describe the experience of interaction in the Skype peer learning sessions;

4. To examine the nature of the synchronous Skype peer-led discussions for two discipline contexts (Applied Linguistics and Local Administration);

5. To investigate the perception of students about the peer learning experience in a synchronous environment mediated by Skype; and,

6. To formulate a conceptual model pertaining to learning with peers in an online synchronous environment.

Each of these aims was considered, in turn, to address the research question and each case in this study was discussed by exploring the experience of learning at distance before taking part in the Skype PL sessions, examining the students' perceived learning in relation to the CoI framework, and documenting the interactions amongst a community of learners that took place over two months in a series of six online synchronous sessions.

1.3 Research Design

A qualitative case study methodology was used for this research in order to study the phenomenon of synchronous PL within the context of online DL (Baxter & Jack, 2008). Additionally, because this research is context-dependent that takes place in a synchronous learning environment, bounded by time (six sessions) and by a single case (master's distance learners) (Cresswell, 2013), the bounding of this research is particularly consistent with the qualitative case study design. Thus, prior expectations were not imposed on the outcome of the study upon following the naturalistic inquiry (Lincoln & Guba, 1985).

A hallmark of a good qualitative case study is that it presents an in-depth understanding of the case (Cresswell, 2013). For this reason, multiple methods of qualitative data collection and analysis were used ranging from interviews before and after Skype PL sessions, recordings of the Skype meetings, and reflective logs. This is mainly because relying on one source of data is typically not enough to develop an in-depth understanding (Cresswell, 2013).

In addition, using a theoretical lens or perspective in qualitative research is increasingly becoming adopted by researchers as theories explain, predict, and help to understand phenomena in the social world (Abend, 2008). This lens becomes an advocacy perspective that shapes the types of questions asked, informs how data are collected and analysed, and offers a call for action or change (Creswell, 2009). Therefore, the lens of the Community of Inquiry framework (CoI) advocated by Garrison, Anderson, and Archer (1999) is used in this study since it seeks to integrate PL as an online educational experience in a synchronous audio/visual environment and examine the interactions taking place. In this respect, the researcher is curious about how the knowledge construction, from a socio-cultural perspective, is going to be manifested in the Skype PL environment. The CoI framework is, therefore, selected to understand the learning process in the online synchronous environment which consists of the elements of group dynamics, facilitation style, design and organisation, support, and analyse learning presence in the online learning environment (Angelaina & Jimoyiannis, 2012b). However, given that this research relies on the use of a peer facilitator instead of involving a teaching figure in order to depict the core sense of the PL strategy, it should be noted that there is a difference between "teaching presence" and "teacher presence" as when given the opportunity, "a number of individuals who are not teachers often collaborate in carrying out the teaching presence role" (Anderson et al., 2001, p. 13) and therefore the teaching presence role is not restricted only to a teacher.

Although qualitative research focuses on both the process that is occurring and the product or outcome, researchers are most interested in understanding how things occur (Frankel & Wallen, 1990) and building on this, the sessions' recordings were analysed to gain a deeper understanding of the peer interactions taking place. Moreover, using thematic coding of interviews and reflective logs provided insights into the role that Skype PL can play in supporting the learning of Algerian master's distance students (Section 4.2.2).

1.4 Significance of the Study

This research study is different from other research on online PL in Distance HE in so many aspects:

1) The context of the research: Applying online PL to support distance learners using tools such as Skype has been widely investigated in the western context such as Europe, Australia, the United Kingdom, and the United States while research on this experience is nearly scarce in the Arab world; thus, will the implementation of a synchronous PL in the Algerian context result in different findings? However, it is very important to consider a flexible approach as the appreciation of each settings' own requirements and culture is essential for successful implementation of PL (Green, 2011). Further to this, peer collaborative learning has been historically embedded into education as both pedagogy and learning strategy (Arendale, 2018). Indeed, literature, with a heavy focus on text-based synchronous discussions, indicates that online PL has been used in a range of ways to effectively meet the needs of students who are mostly enrolled in historically difficult courses such as Science, Technology, Engineering, and Math (Casey et al., 2014) and also nursing and medical fields (Adwan, 2016). However, even though online synchronous tools have been available for some time such as interactive online learning platforms (Elluminate, Wimba, MOODLE), using PL in a synchronous audio-visual environment to support students enrolled in courses such as Applied Linguistics and Local Administration where discussion is pivotal and communication is absolutely key, is still under researched.

2) The communication technology: Although marking positive initial results (e.g. Beaumont et al., 2012; Huijser et al.,2008; Watts et al., 2015), focusing on the synchronous video conferencing when implementing an online version of PL is still at a fairly experimental stage as most studies of online interactions address asynchronous, text-based, course-wide communications; whereas, focussing on more intimate synchronous interactions incorporating more subtle social considerations (Hou & Wu, 2011) did not receive much attention by research until the widespread outbreak of COVID-19 (e.g. Oyarzun et al., 2021). In the context of this

study, synchronous audio/ visual communication is absent in the DL platform designed for the Algerian master's students, and the chat board is ruled by written words; therefore, using Skype can be a good option firstly, because it is already widely used in Algeria, and secondly because it is relatively a free software and easy to use. Furthermore, Skype has flexible accessibility that can be used from anywhere (home, workplace, ...). This consideration is important, as our population of distance learners have busy schedules. Also, HE institutions were using licensed software developed or managed by their institutions. Hence, what could be resulted from using a software that is freely available such as Skype?

Although the resources used and the data collected in this study took place prior to the unforeseen transition to remote learning and teaching as a consequence of the COVID-19 global pandemic, it can be argued that this transition influenced perspectives on online learning delivery modes in that the old model which links quality online learning with asynchronous learning because of its flexibility (Bates, 2022) has been disproved by the increased focus on synchronous lectures and mostly choosing Zoom over the existing learning management system. Surveys have shown that even before the COVID-19, the biggest growth in online learning was coming not through the use of learning management systems but through instructors using Zoom for delivering lectures online because it was easy for them to use without changing very much what they were doing in traditional classes in terms of content delivery and design of learning activities (Bates, 2020). Knowing that the advantages of asynchronous learning include enabling students to be flexible and manage workload more easily so that they can go to the material anytime and anywhere and repeat it as much as they want, there is, however, still the need to look more at the synchronous advantages as well beyond the scope of offering a simulation to the conventional classroom such as the availability of different avenues of communication (e.g. video, audio, and text chat) to choose from for the shy and less vocal students and increasing self-disclosure.

3) Theoretical underpinnings: Common perceptions indicate that PL is grounded on social learning theories such as social constructivism (Zeneli, 2015) and sociocultural theory (Carlson & Stenberg, 2020); however, "there is a lack of theoretical underpinnings to the plethora of studies describing how to perform and act in peer learning" (Carlson & Stenberg, 2020, p.1). So, are there any theories that can help us better understand the interaction among peers in an online synchronous setting? This research argues that placing PL as an online educational experience at the heart of the CoI framework is our point of departure to understand how peers interact, collaborate, and co-create learning activities through identifying the elements of CoI occurring in the PL sessions. This framework has been found suitable for this study for several

reasons. Firstly, it was initially designed to capture the interaction of students in an online environment, which is the case in the present study. Secondly, since the framework was developed for distance learning, it proposes that there are three key elements that have to interact to produce meaningful collaboration: teaching presence (equal to learners' interaction with the facilitator), cognitive presence (equal to learners' interaction with the learning content), and social presence (equal to learners' interaction with fellow peers), which aligns with this study's definition of interaction. Thirdly, the element of teaching presence that can be collaboratively carried out by a number of individuals who are not teachers (Anderson et al., 2001) also aligns with this study's definition of peer facilitation. However, given that the CoI framework was developed and widely used in the western context, does the application of this framework in an Algerian DL context yield the same results?

In short, this research suggests that there is a clear role for Skype PL in supporting the learning of Algerian distance learners specialised in Applied linguistics and Local Administration disciplines. Thus, the research study detailed in this thesis will contribute to the examination of its practical application and the value it provides to Algerian distance students.

1.5 Phases of the Study

This research study has undergone four main phases: design and preparation, data collection, data analysis, and presentation of findings. While each one of these phases took a distinct time period, it should be noted that they overlapped throughout the progress of the study. The design and preparation stage involved scanning the context of the study from which the data would be collected, obtaining ethical approval, introducing the researcher to the online platform of the two universities offering master's DE programmes in Algeria, and recruitment of participants to the study including the informed consent to participate. As for preparing students to participate in the Skype PL sessions, an introductory session was arranged at a time conveniently agreeable to the participants and the researcher to welcome students and provide some recommendations excerpted from the literature about managing the discussion as well as guidance about how Skype operates and its different functionalities (See accompanying material).

The collection of the data spanned over 4 months (See Appendix F) and involved conducting initial interviews with individual participants and teachers, it also included recording the Skype PL sessions, administering reflective logs after each session, and then conducting the final interviews with students who participated in these sessions. The initial interviews sought to understand the students' and teachers' perspectives about the interaction taking place in the DL

programme so that the researcher would get more contextual knowledge rather than relying only on unsupported interpretations and assumptions leading to finding what it is wanted to be found (Halo effect); they also elicited attitudes to the prospect of studying with peers via Skype as well as expectations of the contribution that the Skype PL would make to their overall experience of learning at distance. The reflective logs' questions included students' perceptions of how they felt about the discussions as the sessions progressed, what was personally gained by participating in the session, reasons for participating, what worked well and what did not and what should be improved in the coming session. The final interviews investigated participants' views on the contribution that the sessions made to their online DL experience.

For the data analysis stage, the initial and final interviews were coded thematically and informed interpretation of the perceived value of the Skype PL sessions. To establish the representativeness of the sample, a "thick description" was used (Geertz, 1973, as cited in Stake, 2000, p.444) in analysing the sessions by providing a detailed account of the practice and the context in which it took place as well as incorporating the perceptions of the "actors" involved to get an informed understanding of how these sessions contributed to the students' experience of learning online at distance (Stake, 1995). The understanding of the case was not only based on the participants' individual encounters during the sessions, but it also consisted of describing in detail the student-student, student-peer facilitator, and student-content interactions and how their interplay contributed to the building of a Community of Inquiry to promote collaborative learning that is congruent with what Garrison, Anderson, and Archer (1999) have proposed.

In the final stage, the results of the study were organised into three findings chapters (Chapters 5, 6, and 7). These chapters addressed the first five aims of this study related to the experiences of interaction, types and nature of the interaction, and the perceived value of the Skype PL (see Section 1.2). As for the final aim, the discussion chapter (Chapter 8) tackled the proposed model of Skype PL that focuses on the idea of positioning students as peers who have valuable perspectives with the aim of improving their understanding of the content and contributing to the overall online DL experience.

1.6 Structure of the Thesis

Organised into eight chapters, this thesis begins with an introduction to the study (Chapter 1) followed by an overview of the context within which the research was conducted (Chapter 2) to further understand the nature of the research setting (Section 2.7). To address the research problem and purpose, a review of literature relevant to the study is provided to guide this research in Chapter 3. As this study focuses on peer interaction in distance HE using a

synchronous environment, this review consists of literature pertaining to learning theories, notably adult learning, constructivism, and sociocultural theory (Section 3.1), DE including its definition and theories (Section 3.2), benefits and drawbacks of computer-mediated communication (Section 3.3), interaction in online learning (Section 3.4), an online Community of Inquiry (Section 3.5), and online PL (Section 3.6). The following chapter, Chapter 4, describes the methodology and research design adopted for the study. It particularly explains the research design used to conduct the study including the recruitment of the research participants (Section 4.1.1) and the sequence of the study (Section 4.1.2). This is followed by the rationale of the case study approach that was used to inform the process and phases of data collection (Section 4.2.1). After that, the analysis of the data (Section 4.2.2) and the validity of the study (Section 4.2.3) are elaborated in detail. The chapter concludes by discussing the challenges in data collection, the ethical considerations and the role of the researcher.

As noted in Section 1.5, the results of the study are detailed in three chapters. Chapter 5 analyses and reports the findings from the initial and final interviews. The initial interview revealed preconceptions of studying online at distance (Section 5.1.1), perceptions of interaction in the online DL programme (Section 5.1.2), prior experience of online synchronous communication (Section 5.1.3), readiness and perceptions about participating in Skype PL sessions (Sections 5.1.4 and 5.1.5), and reasons for participating in Skype PL (Section 5.1.6). The final interviews also revisited reasons for participating in the Skype sessions (Section 5.2.1) and presented participants' experiences interacting with peers via Skype and their perception of the community (Sections 5.2.2 and 5.2.3), how interacting with peers via Skype supported their learning (Section 5.2.4), their views on the use of audio-visual communication via Skype (Section 5.2.5), their interaction beyond the Skype PL sessions (Section 5.2.6), and how they envisage the future of this experience (Section 5.2.7). Following this, Chapter 6 and Chapter 7 represent each of the two case studies (the case of the Applied Linguistics group and the case of the Local Administration group) and each chapter provides a description of each of the six Skype PL sessions in terms of the number of students attending each session, the design and content, and interactions taking place. These descriptions were supported with further insights using the CoI framework and students' reflective logs (Sections 6.1-6.6 and Sections 7.1-7.6).

Then, the thesis is concluded with a cross-case analysis and a discussion of the findings in relation to the previous studies and literature reviewed, including proposing a model of Skype PL by deriving conclusions from this study (Section 8.1.6) alongside discussing implications, the limitations of this study, and recommendations for future research (Sections 8.2, 8.3, and 8.4).

1.7 Summary

The purpose of this research is to explore and describe the use of Skype PL and how it contributes to the Algerian students' overall DL experience including their sense of community. The findings intend to fill the gap in knowledge regarding how distance learners experience interaction with peers in an online synchronous environment and inform practice in the improvement of students' online learning experience and provision of effective support.

This chapter sets the scene to introduce this study's background, motivation, and composition. In the following chapter, the context of this research is provided which also informs the research setting in which this study was conducted.

Chapter Two: Educational Context of Algeria

As the broader scope of this study is concerned with the Algerian students' DL experience, it is necessary to provide the general background to the "where" aspect of this research. This chapter, therefore, presents the geographical, technological, and educational context of Algeria. It also provides an account of the Algerian teaching and learning culture and the historical development of the Algerian DE. The last section narrows the focus by discussing the research setting of each of the two case studies investigated.

2.1 Country Profile

Algeria (the People's Democratic Republic of Algeria) is located in North Africa and is recognised as the second-largest country in Africa and the Arab world, and the tenth-largest country in the world with its 2.4 million square kilometres. More than two million square kilometres are desert or semi-arid steppes extending into the southern Sahara region, but the country also contains a fertile strip of cultivable land concentrated along the coast of the Mediterranean Sea (Majumdar & Saad, 2005). The country consists of 48 provinces (Wilaya) and its capital and most populous city is Algiers (Djoudi, 2018). Ethnic origins are varied and complex as most inhabitants are Berbers, who represent the original tribes inhabiting northern Africa, followed by Arabs who came to the area with the extension of Islam, and European nationals representing small numbers, most of whom have left the country because of terrorism (Ait Sidhoum et al., 2002).

Figure 2.1 Map of Algeria highlighting the research setting

A century and a half of French colonial rule has created an ambivalent relationship between the west and western culture and made western French culture an integral part of the identity and social structure. Algerian nationalism, paradoxically, has been fostered by the confrontation with French colonial rule and has been built on Islamic principles and relations with a wider Arab-Islamic world (Ait Sidhoum et al., 2002).

2.2 Internet and Information Communication Technology

Kirkwood (2000) noted that "South Africa and the Northern African countries (Algeria, Egypt, Tunisia, etc.) have considerably higher levels of Information Communication Technology (ICT) access than the remainder of the continent, while in all countries the urban communities are much better served than the rural areas" (p.253). Algeria's first connection to the internet began with email in 1993 (Djoudi, 2018). In 2005, Algeria Telecom launched its "Fawri" ADSL (Asymmetric Digital Subscriber Line) which was followed by the official launch of the "Ousratic" or "Every Home" initiative whose purpose is to offer each family training through the provision of individual microcomputers and broad lines as well as the allocation of VoIP (Voice Internet Protocol) licence for the establishment of internet and voice over IP alternative operators (Djoudi, 2018; Guemide & Benachaiba, 2012). To facilitate the process of Algeria's entry into the knowledge economy, the following national ICT initiatives have been planned:

- The project of the Ministry of Education to equip all schools with computers
- The technology-enhanced learning projects
- The Academic and Research Network (ARN) (Hamdy, 2007; Guemide & Benachaiba, 2012).

Indeed, becoming a part of an information and knowledge society is evidenced by the rate of internet users in Algeria which gradually increased from 25.42 million in December 2020 (Internet World Stats, 2020) to 27.28 million internet users in January 2022 according to Kemp's report (2022).

2.3 The Algerian Educational System

The Algerian educational system has witnessed several changes throughout history, its roots go back to the French colonial system (1830-1962) when the educational system was designed largely to fulfil the needs of the European population for the purpose of perpetuating the European cultural pattern. The language of instruction was French while Arabic was placed as an optional foreign language (Metz, 1994).

After the independence of Algeria in 1962, there have been many reforms aiming at restructuring the educational system; for example, primary education was accessible at six, French is taught as a second language from the third year of primary education, whereas learning English as a foreign language starts until the first year of secondary education (Djoudi, 2018; Rose, 2015). In 1996, the legislation covering the field of tertiary education endorsed in article 53 of the constitution stipulated that the state shall organise the education system and specified that, for all Algerians: the right to education is guaranteed; education is free within the conditions defined by law, and basic education is compulsory (European commission, 2009). Thus, "the education system is structured so that the primary school cycle lasts 5 years, lower secondary lasts 4 years, and upper secondary lasts 3 years" (Djoudi, 2018, p.5).

Additionally, as a result of educational reform in primary, middle, and secondary schools, an approach that allowed students to progress based on their ability to master a skill or a competency at their own pace (i.e., competency-based approach) was implemented in 2002 followed by the design of new syllabi and the publication of new textbooks (Oxford Business Group, 2016).

2.4 Higher Education in Algeria

The public Higher Education (HE) system is subject to the authority of a government minister, who prepares and implements government policy on HE and scientific research (European Commission, 2009). Access to post-secondary studies is open for students holding a baccalaureate certificate or a foreign equivalent; HE is mostly provided by universities and often by HE institutes and teacher training institutes that can be either private or public national institutes and which fall under the responsibility of the Ministry of Higher Education and Scientific Research (MHESR) and sometimes they are also run by the other ministries mostly for employment purposes (Clark, 2006).

There had been many reforms at the level of HE but the most remarkable one was the LMD system (License-Master-Doctorate), which was launched by executive decree in the 2004/2005 academic year and was mainly designed to modernise the university system and "to let the Algerian educational system and research go hand in hand with the international ones" (Idri, 2005, p.1). This system changed the length of studies and reduced the licence degree from four to three years and that is the equivalent of the Bachelor's degree followed by a master's degree that lasts for two years and then, the Doctorate for three years. Learning under this system is divided into semesters and modules are organised into units; besides, this new system places a greater focus on professional specialisation in the vocational Bachelor's and master's degree

courses in an attempt to respond to the country's new socio-economic needs alongside aiming at opening the university to the outside world, protecting the autonomy of HE institutions, training for lifelong learning, and meeting international standards (Djoudi, 2018). However, there are several drawbacks to the efficacy of this complex system such as lack of coordination in the professional working place, high dropout rates, constant change of course by individual students, and the failure of the system to produce graduates with skills appropriate to the Algerian job market (Rose, 2015). It could be argued, however, that the constant changes applied to this sector render students psychologically and pedagogically struggling to understand the environment in which they were learning as there are many questions around this new system that need further investigation such as understanding what conditions were created for its implementation, and most importantly how it works in line with the Algerian teaching and learning culture.

2.5 The Teaching and Learning Culture in Algeria

Unlike some Islamic countries in the region of the Middle East and North Africa (MENA) where government schools are gender-segregated such as Kuwait, Saudi Arabia, and the United Arab Emirates, Algerian students at all levels are studying in mixed-gender classrooms except for those who prefer the single-gender classrooms tend to attend private schools. Also, equality for women is enshrined in Algerian laws and the constitution. Algerian women account for 64% enrolled in tertiary education in 2018 (UNESCO, 2018). They are free to pick any career they choose to be in (Brac de la Perriere, 2005).

Despite the efforts made in this field, it can be said that the "Algerian education is still grounded in the French fact-acquisition orientation, and teaching is almost exclusively in the lecture and memorisation mode" (Soreda, 2013, p.3). In such traditional classrooms where the learning process is centred on the teacher who is the one who plans the content of the lesson, designs objectives, and transmits knowledge to the students, students are expected to have a "fixed view of the learning process as conceived through the hierarchical relationship between the teacher and the learner" (Berrezoug, 2021, p. 217) and therefore, instead of analysing and applying new ideas, students' knowledge is a mere reformulation of the teachers' talk (Ibid.). To break this cycle, there had been some research-led teaching efforts such as the attempt made by Berrezoug (2021) to design a programme based on engaging students in the syllabus design of her teaching units. However, students judged the researcher as being "a lazy teacher who depends on her students to fulfil what they considered her duty. Thus, to achieve self-directed learning in

Algerian universities seems improbable as long as the Algerian socio-culture continues to view the learning process from a hierarchical standpoint" (Berrezoug, 2021, p. 217).

This means that culture is the most sensitive unit in the whole organisational structure and it plays a role in the power relations between individuals even in DL courses as this was further illustrated by Alkailani and his colleagues (2012) by giving the example of small power distance educational environments such as the United States where students intervene without invitation and ask for clarification about the material as opposed to the large power distance cultures such as the Arab States where students participate only when invited and all communication is initiated by the teacher (Ibid.). One possible explanation is that the Algerian educational system can be seen as an examination-oriented system, given that learning is assessed only using a final examination and several continuous assessment elements such as practical tests, assignments, reports and presentations, which may result in the students' passive consumption of knowledge and low self-confidence leaving little to no room for communication among students (Arbelo, 2020) or applying critical analysis skills which are required for self-directed learning. Hence, understanding the learning and teaching culture of the context in which this study was conducted can help inform students' preconceptions of learning in an environment where a teaching figure is absent and therefore, inform preconceptions of the PL practice which can be seen in this context as an attempt to promote a dialogic approach to knowledge construction and to defy what can be called the "banking concept of education" (Freire, 2011, p.117) which is characterised by passive learning and teachers depositing information into their students.

Developing an understanding of the evolution and current practice of DE in Algeria is also an essential consideration since this research revolves around the application of PL in the Algerian DE context.

2.6 Distance Education in Algeria: Historical Evolution and Current Practice

The National Centre for Public Learning (NCPL) was Algeria's first centre in charge of all distance education (DE). During the French colonial period, this educational structure focused on universal learning and employed an instructional approach based on correspondence, radio, and television to deliver instruction to those who were deprived of education. Thus, the Algerian DE programmes account for a major percentage of adult education and NCPL has been educating adults at distance since 1969, including teacher training and secondary-level correspondence courses for adults, which have been published in newspapers and supported by radio (Djoudi, 2018). In 2001, the NCPL became the National Office of Education and Distance Learning (NOEDL) which supported students' preparation for the final examinations and

ensured further or special training as part of social and professional promotion. This was followed by the National Centre of Distance Vocational Education (NCDVE) which was responsible for various Distance training courses as well as the complementary training and orientation of enterprise employees and public servants (Ibid.).

Another important organisation in the history of DE in Algeria is the University of Continuing Education (UCE) which was established in 1990 and still working to this date in enabling access to HE to those who did not obtain a secondary school certificate through 50 centres distributed throughout the national territory (Tempus, 2012). This DE organisation uses public Algerian television to deliver three hours of lessons every week since January 2015 in collaboration with the NCDVE, and this indicates that it is only recently that e-learning has been integrated at the university level (Djoudi, 2018; StateUniversity, 2016). In addition, there is the Algerian Virtual University (AVUNET) which is described by Douidi and his colleagues (2007) as a web-based multilingual e-learning environment that consists of an authoring system with all the tools needed for ongoing course production including content design system with learner self-assessment tools and a collaboration tool allowing users' interaction and discussion as well as indicating their availability and access to their educational materials.

To synthesise, the endeavours made by Algeria in the field of distance HE fall into three categories: Distance or open education programmes offered by traditional HE institutions, distance or open education institutions, and virtual university (Boukelif, 2016; Djoudi, 2009). One example of DE programmes provided by traditional HE institutions is the master's programme at distance. On the 29th of October 2016, a ministerial decree (No. 535) was issued regarding the official embodiment of the idea of a master's at a distance and the registration for online master's studies started in the 2016-2017 academic year (Akrour & Hansali, 2020).

This gradual transition from the correspondence model to multimedia, and then to the interactive web-based model of DE using the MOODLE platform (see Section 3.2) is particularly based on the perspective that the use of information and communication technology in DL contributes to the increase of knowledge and the acquisition of competencies, as well as reducing training expenses, and also to compensate for the lack of pedagogical supervision and basic infrastructure (Boukelif, 2016).

The first registrations for this programme started officially on the 6th of October 2016 in Blida 2 university where students had to select between only two disciplines: "Sociology of Organizations and Human Resource Development" and "School Psychology". Other disciplines are distributed across the remaining four universities as follows: "Local administration" in the

university of Constantine 1, "Applied linguistics" in the university of Oran 1, "Administrative and financial law" in the University of Algiers 1, and "Accounting" in the university of Algiers 3. As these master's online DL programmes grant a graduate certificate, the demand and interest in them have been high in that when the enrolment for the 2016/2017 cohort first started, there had been a registration of nearly 4 thousand students[1], among which the majority were females and students with the classical degree that took place before the introduction of the LMD system (see Section 2.4). However, only about 500 students were selected for each programme (Akmoun & Ouahib, 2020).

The next section (Section 2.7) narrows the focus by discussing the two DE programmes associated with the two case studies examined in this research.

2.7 The Research Setting

The context for this investigation was two master's DL programmes provided by two different Algerian universities located in the north (see Figure 2.1). The first one is Applied Linguistics which, according to one of the programme teachers (AL-T4, 2021), had an approximate enrolment of 102 students in the 2018 academic year, and the second one is Local Administration which had an approximate enrolment of 380 students in 2018 who participated online as mentioned by LA-T1 (2021). These two-year master's programmes (Applied Linguistics and Local Administration) are offered both on-campus and online. However, this research focuses on the two master's DL programmes that were offered as totally online courses via the MOODLE course management system.

Similar to Douidi and his colleagues' (2007) description of the web-based environment of the virtual university (see Section 2.6), the MOODLE platform adopted by these two master's DL programmes provides indirect means of communication "asynchronous tools" such as email, group discussion board, and wiki in addition to file sharing, content presentation area, assessment and grade centre, activities and quizzes plus, synchronous text-based chat which allows student-instructor direct interactions. These chat sessions are programmed at a specific time and allows students to ask questions regarding pedagogical matters as well as other issues related to the programme as a whole. The tutors can schedule chat sessions for the subject they are supervising, as they set the day, time, and topic, with the need to respect the systematic sequence of the pedagogical content. Hence, all interactions were online but mostly

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[1] Website of El-Hiwar press https://www.elhiwardz.com/national/64734/

asynchronously via email, discussion forums, and other tools available on the platform (Bin Issa, 2016).

This master's at distance programme differs from the face-to-face master's programme in the form and means of education, as it moves from the classrooms and halls to the electronic learning platform; however, each semester ends with a written exam that requires physical attendance of students. Thus, the students' assessment and success in each semester are divided equally between the mark of the written examination and the marks obtained on the online platform which include quizzes, activities, and reports. Students' participation on the discussion board is also a critical component of the programme, as it represents a portion of the final grade. Students' participation was graded both quantitatively based on the number of interactions and qualitatively by answering the assigned questions. Together, these grades are considered with the grade of the written exam that is organised in attendance at the end of each semester (Ibid.).

For the course of the study in the master's at distance, the two years programme is divided into 4 full semesters, each semester includes educational units which, in turn, include instructional materials (see Table 2.1 and Table 2.3). Also, each semester lasts from 14 to 16 weeks, with an average hourly volume of 1464 to 2442 hours over the four semesters. The range of subjects covered by the instructional materials includes a group of sections whereby students' understanding of these sections' content is tested through the self-assessment activity that follows every four sections. Each section includes lessons that are posted in word or portable document format that can be downloaded by students. After the end of each section, students are also evaluated through an activity that includes a set of questions that must be answered within the time specified in the calendar (at least 72 hours) and its grade represents 50% of the overall grades of the online platform. As previously noted, final examinations are scheduled for students at the end of each semester which are also organised in a way similar to the regular course (Akrour & Hansali, 2020).

Additionally, this programme provides three types of forums in order to create a space for communication between the active members of the platform:

1. Discussion forums: a space for interaction and discussion among students and also between students and their teachers about the content provided and receiving feedback. The participation mark in the forum represents 25% of the whole platform mark.
2. Teachers' announcements forum: it is a space through which lecturers (lesson designers), as well as tutors, can communicate with students and post announcements, direct notes, and instructions to students.

3. Students' concern forum: it is a space of communication between students and administration that considers the challenges and concerns voiced by students (Bin Issa, 2016).

According to Bin Issa (2016), Applied linguistics is one of the disciplines approved by the MHESR at the master's level that falls within the Linguistics Studies branch, the field of Arabic Language, and Literature. The accredited DL course in this specialisation aims to achieve a set of goals, the most prominent of which are:

1. Training students with the ability to treat topics that arise in Applied Linguistics, such as media language, regular and machine translation, speech disorders and so on.
2. Preparing researchers who can suggest educational courses that respond to contemporary scientific and practical requirements in the fields of Applied Linguistics.
3. Preparing researchers with experience that enables them to carry out applied research in the field of Applied Linguistics, and the fields of education as a whole (Bin Issa, 2016).

The Local Administration DL programme, on the other hand, was offered by the Department of Administrative Sciences in the Faculty of Law and was also based on both synchronous and asynchronous text-based communication methods. Similar to the Applied Linguistics programme, this programme includes seven modules and consists of four semesters (Table 2.2 and Table 2.3). The aims of this DL programme, as explained by the Deputy Head of Department (LA-T3, 2021), were to train students in the field of Administration sciences, which is a branch of public law that is concerned with public administrative bodies, in terms of activity and means in particular to satisfy public needs. Additionally, the local administration is concerned with decentralised (local) administration, in particular, as it is charged with managing local affairs. Therefore, general topics were addressed by specialisation, and others related to management and development, while taking into consideration the legislative and organisational aspects.

Based on the views of students and teachers in the initial interviews, it has been indicated that social presence (see Section 3.5.1) in the Applied Linguistics programme began to be established by the means of online welcome messages on the online platform, whereas for the Local Administration programme, welcoming and brief introductions about the units of the programme were in the form of short videos posted on the platform by tutors and course designers. As explained earlier, the course content of both Applied Linguistics and Local Administration was divided into 4 units (basic educational unit, methodological educational unit, expeditionary educational unit, and horizontal educational unit), each of which included a

number of educational materials which were covered in approximately 14 to16 weeks per semester (see Tables 2.1, 2.2, and 2.3).

For the purpose of this study, that is conducting synchronous sessions with the intention of complementing rather than replacing the standard online materials and text-based asynchronous and synchronous support offered by the university, six synchronous sessions were offered via Skype on the weekends starting from August 2019 to September 2019 (see Appendix F). At that time (2019), neither of the two DL programmes used the audio-visual synchronous type of interaction, and therefore, Skype was suggested since it is a freely available internet communication software. Students were introduced to the functionality of Skype in the first welcoming session where alternative contact information like emails and phone numbers were shared to mitigate any possible technical issues with connecting to Skype.

2.8 Summary

This chapter has situated the study in the Algerian educational context, highlighting some background information on Algeria's country profile, internet penetration and ICT, and educational system. It also explains the Algerian teaching and learning culture in order to understand the relationship of the learner to the teacher, to the power relations in society, and most importantly how the Algerian socio-culture views the teaching and learning process. A brief account of the Algerian DE has been explored to arrive at an understanding that similar to what Saba (2003) perceived of DE in America and based on how it was employed in the Algerian organisations, it can be viewed that Algeria's approach to DE has been atheoretical but pragmatic. Finally, a detailed description of the setting of this research was presented to understand the internal workings of the two DL discipline contexts under investigation. The next chapter provides a review of the literature which also informs the research design and analysis outlined in this thesis.

Table 2.1 Applied Linguistics programme units of three semesters

Educational Units	Applied Linguistics		
	Semester 1 Year 1 14-16 weeks	Semester 2 Year 1 14-16 weeks	Semester 3 Year 2 15 weeks
Basic Educational Unit	1. Applied Linguistics 2. Psycholinguistics 3. Theories of Learning and Teaching	1. Applied Linguistics 2. Sociolinguistics 3. Language teaching curricula	1. Applied Linguistics 2. Terminology 3. Lexicography
Methodological Educational Unit	4. Teaching Arabic grammar 5. Oral Expression Techniques 6. The Art and techniques of Communication	4. Language correction 5. Written expression techniques 6. The Art and techniques of Communication	4. Research Methodology 5. Evaluation techniques 6. Discourse analysis
Expeditionary Educational Unit	7. Stylistics	7. Text linguistics	7. Educational Psychology
Horizontal Educational Unit	8. English	8. English	8. Work Ethics

Table 2.2 Local Administration programme units of three semesters

Educational Units	Local Administration		
	Semester 1 Year 1 14 weeks	Semester 2 Year 1 14 weeks	Semester 3 Year 2 14 weeks
Basic Educational Unit	1. Organisation of constitutional powers 2. Administrative sciences 3. Administrative responsibility	1. Territorial communities' law 2. Urban management and development law 3. Human resource management plan for regional communities	1. Public Transactions 2. Special administrative disputes 3. Disciplinary system for public officials
Expeditionary Educational Unit	4. Economic regulation law 5. Tax law	4. Administrative configuration 5. Settlement of labour disputes	4. Applied methodology for the preparation of thesis 5. Methods of managing the property of regional communities
Methodological Educational Unit	6. Research Methodology	6. Research Methodology	6. Corruption and work ethic
Horizontal Educational Unit	7. French	7. French	7. English

Table 2.3 The fourth semester of Applied Linguistics and Local Administration programmes

	Semester 4 **Year 2**
Applied Linguistics	● Personal work (graduation Thesis) ● Field Work ● Seminars and Conferences ● Other Activities (Preparing reports on the discussions of master's and Doctoral Thesis)
Local Administration	

Chapter Three: Literature Review

This chapter presents a review of the relevant literature highlighting the key theoretical and research foundation to inform this proposed study. It starts with an examination of the learning theories related to PL and online learning in HE such as adult learning, constructivism, and sociocultural theory and then moves to an exploration of literature associated with online DL, with a particular focus on interaction using synchronous communication and online PL.

3.1 Theories of Learning Underpinning the Study

The theoretical framework has an impact on the meaning we give to the collected data. That is, the constructs, concepts, language, models, and theories that structured the study in the first place will be reflected in the analysis and discussion of the findings of the study (Merriam & Tisdell, 2016). In order to investigate the contribution of online verbal PL to the DL experience of the Algerian master's students, it is first worth considering the theories that underpin such a learning-centred strategy and because several of the theories' ideologies overlap, this research focusses on three theories of learning: Adult learning theories that seek to understand how adults learn, constructivism that supports active learning and co-construction of knowledge, and socio-cultural theory that explains how learning occurs first through social interaction and second through individual internalisation of these interactions.

These theories are more relevant to this research for the following reasons: First, given the age of the participants of the study and under the premise that adult learners always bring to the learning situation their unique learning characteristics (Ference & Vockell, 1994), recognising these characteristics will help us understand how adults learn best. Secondly, DE researchers have paid attention to social learning theories because not only of the paradigm shift in education but also because online DE has transformed the philosophy and practises of DE and made collaborative learning possible. Further to this, social learning theories are now widely acknowledged as useful in examining interactions amongst groups of online learners, particularly in a peer-to-peer setting (Garrison, 2011) where learners have much opportunity to interact with one another by testing and defying their understandings (Bates & Poole, 2003).

3.1.1 Adult Learning Theories

It is important to note that the age of the participants enrolled in the master's DL programmes, which ranges from 27 to 60 years old, is what justifies the attention to adult learning. Although the theories described in the following subsections (Sections 3.1.2 and 3.1.3) have been originally introduced to explain children's learning, they apply equally to adult learning,

especially in cases of mentoring novice adult learners by more capable peers or engaging in various PL activities. However, it's still necessary to think about some understandings and disagreements on how adult learning varies from that of children. Today, many theories and models attempt to explain the learning of adults. The most well-known theory is the one pioneered largely by Malcolm Knowles in 1973 which is andragogy. For Knowles (1990), "andragogy" is a concept that is learner-focused which describes the learning of adults as opposed to "pedagogy" which is the learning of children.

According to Knowles' s concept of andragogy - "the art and science of helping adults learn" (Knowles et al., 1985, p.1; Knowles, 1990, p. 54), adult learning is based on two attributes: first, learners are conceived to be self-directed and independent; and second, the teacher's function is conceived to be a facilitator of learning rather than content presenter (Pratt, 1998), focusing on the learner choice more than expert control. For Reischmann (2004), both attributes fit into the specific socio-historic thoughts in and after the 1970s, for example, Illich's and Reimer's deschooling theory, Rogers' person-centred approach, and Freire's 'conscientizacao'. Dewey (1933), however, views that many adult learning principles are based on socio-constructivist methods or a more comprehensive concept known as "social learning," in which learners are expected to actively participate in the construction and maintenance of their knowledge.

Adult learners are "precisely those whose intellectual aspirations are least likely to be aroused by the rigid, uncompromising requirements of authoritative, conventionalised institutions of learning" (Lindeman, 1926, pp. 27-28, as cited in Knowles et al., 1998, p. 38). Thus, Knowles (1990) explains the characteristics of adult learners based on the following assumptions:

1. The need to learn- Adult learners need to know how learning will be conducted, what learning will occur, and why learning is important.
2. The Learner's self-concept- Adults have the self-concept of being responsible for their own decisions and consequently need to be considered as capable of self-direction.
3. The role of learner's experiences- Adults come to learning situations with accumulated experience which is the richest source for learning. However, adults tend to develop mental habits, biases, and assumptions that usually make them resistant to new ideas and alternative methods of learning.
4. Readiness to learn- Adults are willing to learn what they need to know to cope with real-life situations.
5. Orientation to learning- Adults will be motivated to learn if they perceive the learning as useful in performing the tasks or sorting out issues they face in their real life.

6. Motivation- Although adults respond to external motivators such as promotions and better salaries, internal motivators are the most effective motivators for learning such as the desire for increased job satisfaction and self-esteem.

While Knowles's (1990) assumption that adults learn differently and are more motivated than children was evidenced by anecdotal experience, there is still a debate on the extent to which these assumptions are specific to adult learners (Merriam, 2001). The disputes centred around Knowles's (1990) assumptions of andragogy lie in the usefulness of andragogy as a model and theory for the 21st century (St Claire, 2002) and whether a model of education similar to that of Knowles can be adequate for managing the needs of the modern, lifelong learner of today (Jones et al., 2011). The accuracy of Knowles's concept of andragogy as a guide of instruction has been also questioned by many academics and practitioners as there has been a debate as to whether the assumptions of andragogy offer a philosophical position and principles of good practice rather than a comprehensive theory of adult learning (Hartree, 1984; Merriam, 2001; Merriam & Caffarella, 1999) whereas, Pogson and Tenant (1995) state that it focuses more on adulthood as a social construction over the physical and cognitive development.

Andragogy represents an attempt to understand the difference between adult and childhood learning; however, it tends to focus more on the socially constructed experience as the mere source of information which could be a much less reliable indicator of learning than the child's stages of cognitive development; it is also based on the assumption that adults can be self-directed learners, but this can also be applied on children. Although the view of andragogy, as well as pedagogy, has been shifted from teacher-centred to student-centred learning (Merriam, 2004), "Adults' dependence on the instructor is based on their previous levels of knowledge of the topic. If they have limited knowledge, they will depend on the instructor more" (Cercone, 2008, p. 146).

Furthermore, the development of Andragogy resulted in the inclusion of other related research areas to represent adult learning such as experiential learning, self-directed learning, and transformative learning. The examination of these concepts is based on their application in the context of designing online learning environments because "the more one understands the nature of adult learning, the better one can understand the nature of distance learning" (Moore & Kearsley, 1996, p. 153). However, no one adult learning theory can be successfully applied to all adult learning environments (Frey & Alman, 2003).

The concept of experiential learning is central to andragogy as it draws the importance of experience for adult learning (Brookfield, 1995; Cercone, 2008). "Learning by doing" is a good

way to describe this theory (Olaniyi, 2015). Thus, the two goals in the experiential learning process are having the learner directly involved with the specifics of a particular subject and learning about one's learning process (Kolb & Kolb, 2009). Outlined from the work of Kolb, there are four key concepts of experiential learning: 1) concrete experience which involves being open and willing to involve in new experiences; 2) reflective observation which involves observation and reflective skills so new experiences can be viewed from a variety of perspectives; 3) abstract conceptualisation which involves analytical abilities allowing the generation of integrative thoughts and concepts based on observations; and 4) active experimentation which entails that for new ideas to be used in practice, there is a need for decision-making and problem-solving skills. This process is repeated constantly as the learner acquires new experiences (Merriam & Cafferella, 1999, p. 224). Experiential learning, therefore, is a cyclic process that involves setting goals, thinking, planning, experimenting and making decisions, and finally, action, followed by observing, reflecting and reviewing; besides, it is mainly learner-centred because it relies on the experience of participants and their own reflection about that experience, rather than using lecture as the main approach to learning (Olaniyi, 2015).

Similarly, self-directed learning is a key notion in adult learning, and it is frequently associated with the transition from a teacher-centred to a learner-centred approach (Garrison, 2003). This concept suggests that "the locus of control in learning lies with the adult learner, who may initiate learning with or without assistance from others" (Lowry, 1989, as cited in Cercone, 2008, p. 148). In his theory of transactional distance (see Section 3.2.2), Moore (2007) defines the theory of self-directed learning in relation to the concepts of independent study and autonomy whereas, Du Toit-Brits and Van Zyl (2017) define self-directed learners as those who are open to learning, curiosity, autonomy, and taking the initiative to learn in a self-controlled manner, and also who make plans by determining their learning goals and organising how to access learning resources. One of the most significant characteristics of self-directed learners is their ability to benefit from online learning environments (Chou, 2012). With the progress of computer-mediated communication (see Section 3.3), Garrison (2003) suggests that the teaching and learning transaction within a critical Community of Inquiry (see Section 3.5) needs to be informed by the concept of self-directed learning as the research of Sandars and his colleagues (2020) indicates that individuals who have acquired self-directed learning skills are more likely to be persistent in their learning, as well as motivated and engaged in online learning. This goes in line with Garrison's (2003) collaborative constructivist view of self-directed learning as being composed of self-management, self-monitoring, and motivation. Through the use of self-directed and cooperative teaching and learning methods, such

approaches aim to establish efficient means of integrating learners in order to exchange experiences and best practices (Tambouris et al., 2012). However, students may lose their self-control in the online learning process and have a problem focusing on learning (Yustina et al., 2020). So, learners may find it hard to persist or achieve the desired educational outcomes if appropriate support and guidance is not available (Garrison, 2003).

Mezirow's transformative learning theory, on the other hand, builds on self-directed learning theory in that it is considered a constructivist theory of adult learning (Cercone, 2008) which describes the process by which individuals transform problematic frames of reference (i.e., sets of assumption and expectation) to make them more inclusive, discriminating, reflective, open, and emotionally able to change (Mezirow, 2006). The two fundamental elements of transformative learning are a critical reflection or critical self-reflection on assumptions and participating fully and freely in reflective discourse (Mezirow, 2006). While the first element indicates individuation, the second one has a broadening emphasis on the significance of the relationships with others in the transformative learning process (Taylor, 2008).

Adult learners' dynamic and emancipatory nature is what makes their way of generating understanding and engagement in activities different from children's learning environments and this is mainly due to their maturity, sense of professionalism, and the bulk of experience that they bring to the learning environment which allows the transfer of skills and knowledge and be the richest source of information for one another. Additionally, because of the dynamic and emancipatory nature of adult learners, it has become clear that there is no one comprehensive model of adult learning. However, each of the theories discussed above gives an overview of the defining characteristics of adult learners which can be manifested and performed in both formal and informal learning environments, and hence can be used to inform the design of online social environments to best support the needs of adult learners which are shaped by culture and society, and address issues related to the DL setting of this research. In this respect, adult learning theories were explored to provide a theoretical base from which to understand who are the learners involved in this study and what is the nature of their approaches to learning.

3.1.2 Constructivist Theory of Learning

Developed out of Piaget's cognitive development, constructivism, according to Duchesne and her colleagues (2013), views learners as active participants in constructing new knowledge and learning as a self-regulated process that builds on learners' existing knowledge. Learners share information in the quest for meaning and reflect on the knowledge that they have constructed, and the processes that they used. Nurturing this knowledge construction in an online setting

demands more focus on the strengths of synchronous and asynchronous discussions conducive to developing knowledge-building communities (Jonassen, 2000). Each of Dewey (1916), Bruner (1996), Piaget (1973), and Vygotsky (1978) believes that learners could actively engage in the process of knowledge construction based on their prior knowledge whereas the role of the teacher is to guide the interaction process rather than directing learning to the teaching outcomes. Hence, teaching is a social activity whereas learning is a private activity (Glasersfeld, 1992).

The main purpose of education for Dewy (1916) is to improve the reasoning process which implies drawing conclusions and constructing explanations using existing knowledge. He also suggests a problem-solving method that is based on the premise that selecting a problem for study should be focused on learner interests because a student who is not motivated will not really perceive a problem (Ornstein & Hunkins, 1998). As a result, constructivist methods focus on authentic problems and the learner's ability to solve them and this is where problem-solving and the process of discovery come together (Dewey, 1916; 1933). However, while Dewey focuses on the learning experience, Vygotsky, on the other hand, places much importance on the social environment instead and how its creation in an educational setting can provide the necessary scaffolding for the learner to progress. His research posits that when opportunities are given to individual learners for creating meaning, applying new concepts, and, most crucially, reflecting with others, learning becomes more of an active process that requires learners' active participation in the construction of new knowledge rather than the passive acquisition of knowledge through memorisation and direct instruction (Larochelle et al., 1998). Therefore, what is needed more is a common space for communication which will eventually lead to mutual support. Vygotsky's approach, although he was addressing the learning of children in the first place, can be also applied to novice adult learners especially those who are concerned with engaging in purposeful and meaningful learning supported by a social space, as in the case of this research.

Further to that, based on the assumption that before cognitive growth can occur within the individual, it first takes place on a social level (Vygotsky, 1978), social constructivism contributes to our understanding of human behaviour and learning from a collaborative and communal perspective. Learning, for social constructivists, is a social process and online educational environments such as discussion forums are known to sometimes make the learning experience more challenging, and this is mainly because of the reduced social component relative to face-to-face interactions, which is inherently contained in the conventional classroom environments where learners can interact more easily (Garrison, 2011). Hence, features of

face-to-face settings such as social cues, gestures, tone of voice, and cultural characteristics are among the ways of reducing anonymity and adding a social component to the online discussion; however, these features are often thought to be "missing" (Ho & Mcleod, 2008; Stodel et al., 2006).

It is also worth noting that social constructivism incorporates both constructivist ideas that view learning as a private process within an individual and sociocultural ideas that acknowledge the importance of others in the learning process (Hall, 2007). Thus, the following section (Section 3.1.3) highlights the importance of the social environment as explained from a sociocultural perspective and how it relates to PL.

3.1.3 Sociocultural Theory of Learning

In addition to constructivism, PL practises are also underpinned by the sociocultural theory of education that is built on Vygotsky's ideas emphasising students as "active participants and co-constructors of learning, two important aspects of peer learning" (Carlson & Stenberg, 2020, p.1). Learning, according to sociocultural theorists, occurs as a result of social interactions and takes place within a specific cultural environment (Bates, 2019). Jarvis (1992) argues that "the process of learning is located at the interface of people's biography and the socio-cultural milieu in which they live, for it is at this intersection that experiences occur" (p. 17). In this approach, individuals learn in culturally, linguistically, and historically constructed settings such as family, schools, and workplaces (Lantolf, 2000). Thus, the PL process from a socio-cultural perspective can be explained by some of its key concepts that can be applied to adult learning such as intersubjectivity, cognitive apprenticeship and assisted learning.

Intersubjectivity, as highlighted by Gallimore and Tharp (1990), is the way individuals perceive the world and share meaning. Going beyond basic sharing, Gillespie and Gornish (2010) conceptualise intersubjectivity as "the variety of relations between perspectives" (p.19) and this definition can be extended to include "the mutual awareness of agreement or disagreement and even the realisation of such understanding or misunderstanding" (p. 19). Thus, the concept of intersubjectivity according to Hoggan and his colleagues (2017) "provides for more holistic understandings of perspective transformation as a phenomenon that is not and indeed could not be a purely rational or individual process" (p.61). A Vygotskian view on PL suggests that research on peer collaboration needs to focus on inter-psychological processes such as intersubjectivity (Forman, 1992). This can be explained that when learning participants share and experience intersubjectivity, scaffolding is at its best in that working on a shared goal, content, values, or ideas allows intersubjectivity to attain effective communication and

collaboration. Hence, these shared aims and values can assist learners in constructing a new body of knowledge, negotiating meaning, and rethinking or restructuring issues and activities in light of the viewpoint of peer learners (Diaz et al., 1990).

Similarly, cognitive apprenticeship which is frequently used in online courses (Hall, 2007) is highlighted by Rogoff (1990) as a socially constructed interactive relationship similar to the master-apprentice relationship in skilled trades; however, in this context, the mentor uses authentic learning experiences to enhance the learner's skills by working closely with him/her (Brown & Palincsar, 1989). Thus, teaching for the cognitive apprenticeship can be manifested in many forms in which one might "assist" a learner in learning (Gallimore and Tharp, 1990). An ideal cognitive apprenticeship according to Brown and his colleagues (1989) has six methods as follow:

1) Coaching by observing and supervising students in order to guide them towards the expert performance;

2) Scaffolding and fading to provide support for what learners are unable to achieve at the moment and gradually remove that support when competency is demonstrated;

3) Reflection by promoting self-awareness among students through performance replays;

4) Articulation by encouraging students' reasoning and problem-solving processes;

5) Modelling by explicitly demonstrating invisible processes such as illustrating steps of working through a problem aloud to help students understand the task; and

6) Exploration by leaving room for students to apply their problem-solving skills.

It can be argued that these methods of cognitive apprenticeship represent teaching techniques that are based on two important features of the sociocultural theory which are apprenticeship and scaffolded learning; however, understanding these methods of learning assistance that exist in both formal and informal adult learning environments as evidenced by sociocultural research (e.g. Bonk & King, 1998; Bonk & Kim, 1998) is also important for informing the application of the PL approach to adult learning. In addition, some aspects of the theory are also embedded in Topping and Ehly's (2001) theoretical model that guides understanding of how PL works. This model consists of the following five categories:

1. Organisation and engagement- the need for both helper and helped to work collaboratively on tasks, elaborate goals and plans, individualization of learning and increased immediacy of feedback, and diversity of a different kind of learning interaction.

2. Cognitive conflict- conflict and challenges are part of PL but they are necessary to bust old myths and false beliefs.

3. Scaffolding and error management- peer support and scaffolding are needed to monitor learners' performance in order to identify, diagnose, correct, or manage misconceptions and errors and this requires the helper to provide a cognitive model of competent performance however, this makes the cognitive demands on the helper considerably high.

4. Communication- being so integral to learning, through communication, students can explain and understand concepts. This category also involves listening, questioning, summarising, speculating, and hypothesising which are all worthy transferable skills.

5. Affect- maintaining motivation and focus on a task needs a sense of responsibility as well as a trustworthy relationship with a peer who is not in a position of authority as it allows for diagnosis and correction.

Topping (2005) explains that these five sub-processes feed into a wider ongoing process of adding and extending capacities (accretion), adjusting current capabilities (re-tuning), and rebuilding new understanding (restructuring). This leads to the joint construction of understanding between the helper and the helped (inter-subjective cognitive co-construction). Although this may not represent absolute truth, it lays the groundwork for further progress; besides, given that this model synthesises the processes involved in PL in a face-to-face learning environment, online contexts may involve different processes in that the interplay among students, facilitator, content, and the online context may influence each of the aforementioned five sub-processes, especially the process of organising the PL activity which includes considerations about the online medium and form of interaction i.e., synchronous (same time) and/or asynchronous (different time) interactions and this is why it is important to investigate peer group interactions in an online setting and its related processes.

Distance learners can often be remote from campus-based facilities and feel isolated. As a result, learners need assistance so that their learning can go through a transitional process from their existing frames of reference or ways of knowing to the new information. Hence, collaboration with more capable peers can assist the learner to progress beyond his/her current level of comfort, thus enabling learning and cognitive development to take place (Maurino, 2007) which

is, in other words, the process of linking between "what is" to "what can be" as suggested in Vygotsky's theoretical construct of the Zone of proximal development (ZPD).

Vygotsky (1978) explains ZPD as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p.86). Although Vygotsky's ZPD implies that the adult (teacher) helps the learner to move across the ZPD by creating the necessary scaffolding which includes "the engagement of children in interesting, culturally meaningful collaborative problem-solving activities" (Bigge & Shermis, 1999, p. 130), Vygotsky's ZPD can also provide a theoretical background from which to understand the potential contributions of adult PL as "the more knowledgeable other" can also be a peer. In the end, collaboration with another individual, whether it be a teacher or a more knowledgeable peer, leads to development in culturally appropriate ways (Doolittle, 1995). Doolittle (1995) also emphasises that both children and adults are developmentally dependent, and thus interdependent. Therefore, ZPD provides a basis from which to discuss this interdependence and how individuals depend on each other in a social context where each member of the group can provide a resource and/ or be the resource necessary for development.

Lastly, socio-cultural and social constructivist theories of learning both affirm that cognitive development must take place in the context of supportive environments and that such support may be social, cultural, experiential, or collaborative (Roschelle and Teasley, 1995, as cited in Oliver & McLoughlin, 2001). The implications of these theories for educational practice are that learners need to be assisted, supported and guided as they develop competence. Hence, within a technology-supported environment, the learning environment must be designed to enable novice learners to gain knowledge within a supportive framework (Oliver & McLoughlin, 2001). Although some of their key concepts related to PL overlap, the sociocultural theory is different from social constructivism since it considers the larger social system in which an individual's learning occurs through social interaction and culturally organised activities (Shah & Rashid, 2017). In other words, both theories emphasise the importance of context in learning and knowledge construction; however, sociocultural theory gives more importance to the use of the social environment throughout the learning experience describing the mediation role of historically situated cultural tools and artefacts such as language, symbols, concepts, and texts and how once the teacher or a more experienced peer models to the learner how to use these tools, the learner begins to use the tool they have internalised in performing other activities and in expressing thinking (Hall, 2007). Hence, new

knowledge is created and shaped not just by the social context, but also by the cultural tools and artefacts that exist within it (Cole & Wetsch, 1996).

3.2 Distance Education and Online Learning

Taken in conjunction with the DE setting of this study, it is important to review this method of delivering education as without understanding what is DE, its theories, and practice, meaningful discussion and research on DE pedagogy cannot take place.

3.2.1 Defining Distance Education and Online Learning

Even before the abrupt transition to remote learning due to the COVID-19 pandemic, the advancement of technology and the emergence of the so-called democratisation of education have challenged the paradigm that defines education as the process by which an instructor in a class teaches students in the same place and time and resulted in the introduction of different settings and methods for the delivery of education and instructions (Moore et al., 2010). These new methods and systems of delivering education have created overlapping definitions and terminology and even sometimes used without prior definition, especially in the case of using the three terminologies of online learning, e-learning, and distance learning (DL) interchangeably in the literature related to DL including other recent terms such as mobile learning, blended learning, and web-based instruction which, according to Moore and his colleagues (2010), are increasingly becoming blurred with the advancement of technology even for their recipients. It is, therefore, crucial to trace borders between the three terms of e-learning, online learning, and DL as each one has its own characteristics. In doing so, the definition of these terms is explored respectively in order to build a solid ground on which this research can use and define the term DL.

- *E-learning*

In their attempt to build an inclusive definition of e-learning, Sangra and his colleagues (2012) argue that there is no single definition of e-learning that would be accepted by the majority of the scientific community simply because of the different understandings of e-learning are conditioned by particular professional approaches and interests. Accordingly, they propose the following definition that combines aspects of previous contributions:

E-learning is an approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication and interaction and that facilitates the adoption of new ways of understanding and developing learning. (Sangra et al., 2012, p. 152)

Sangra and his colleagues (2012) also indicate that although the consensus regarding this definition was quite strong, the participating experts insist on considering the evolution of the technologies used for learning and teaching and certain socioeconomic factors that may not need to be explicitly included in the definition.

Although definitions in the literature (e.g. Dringus & Cohen, 2005; Henry, 2001; Triacca et al., 2004) use the two terms of online learning and e-learning interchangeably, it can be inferred that the term "e-learning" can encompass the elements of online learning such as any form of telecommunications and computer-based learning and thus, it is broader than online learning which is based on using specifically the internet and the web (Bates, 2005, p. 8).

- *Online learning*

Many authors such as Benson (2002), Conrad (2002), and Hiltz and Turoff (2005) discuss the term online learning with a focus on the accessibility aspect describing it as a non-traditional and an improved version of DL that increases learners' access to educational opportunities. The use of the terms online learning and DL in the literature interchangeably indicate a clear overlap between their definitions, especially because DL became more of an online process after its transition from using the method of correspondence and printed materials i.e., the internet has only altered the form of the correspondence from the postal system into the virtual one and the involvement of a guidance figure, that is a virtual instruction provided by a tutor or instructor, is crucial. Thus, it is important to recognise the relationship between DL and online learning as a result of the advancement of technology and clarifying this overlap can be drawn from Rekkedal and Eriksen's (2003) view of online learning as a support for students who study in any educational system, whether distance or face-to-face. Bates (2005) goes further with this point to clarify that "distance learning can exist without online learning, and online learning is not necessarily distance learning" (p. 15). Bates (2005) also adds that the term "fully online" refers to the course where students do not need to attend any face-to-face classes but still must have access to a computer and the internet in order to complete the course. In other words, "fully online courses are distance courses" (p. 09). This definition implies that students may also be required to read printed books and articles, as well as attend face-to-face classes on an optional

basis (ibid.). In light of the aforementioned definitions, it can be concluded that online learning came with the age of the internet as a form of web-based instruction delivery and with the age of the COVID-19 pandemic as a form of transition mechanism to ensure the continuity of education with its potential to support students' learning experiences by providing connectivity, accessibility, and flexibility. Hence, online learning is no longer an option; rather, it is a necessity.

- *Distance Learning (DL)*

The definition of DE has undergone several changes as it historically evolved from correspondence education, which is the initial form of DE that used a postal system to deliver the learning materials before the advancement of technology, to relying on the web/internet-based delivery systems. The terms DE and DL are often used interchangeably however, DE is more related to the pedagogical design and practice whereas, DL reflects students' act of learning at a distance (Tolu & Evans, 2013).

DE, which is also called DL, distributed learning, or remote education, has now existed for ages. Accordingly, the historical evolution of definitions and generations of DE tells a story about the advancement of technology as well as the evolving use of educational technologies and especially their affordances in DE. Many scholars such as Khan and his colleagues (2001), and Bates (2005) summarise the evolution of DL in three distinct generations as it is illustrated:

1) First generation: "correspondence education", where students and teachers communicate with each other through the mail using postal services for delivering written and printed materials.

2) Second generation: "multimedia distance teaching or broadcast/ Teleconferencing", where television and radio broadcasts are used by the students and teachers for communication in addition to print materials.

3) Third generation: "interactive, web-based instruction", where resources of the World Wide Web enhance communication, not only between students and teachers but among students as well.

Taylor (2001), on the other hand, proposes five generations of DE: First, the correspondence model that relies on print technology; second, the multimedia model that depends on the print, audio and video technologies; third, the tele-learning model that applies telecommunications technologies allowing synchronous communication to take place; fourth, the internet-based

flexible learning model; and fifth, intelligent flexible learning model based on the interactive nature of the internet. Given that this model was proposed before the advent of social media and Web 2.0, it seems that it excluded the new generation of DE, which heavily relies on Web 2.0 (Aoki, 2012). Another generational perspective has also been proposed by Anderson and Dron (2011), namely cognitive-behaviourist, social constructivist, and connectivist which appears to be similar to the previously mentioned generational perspectives suggested by Taylor (2001) and Bates (2005) in that they consider only the technologies available at the time. However, the development of each new technology brings additional affordances to the learning process and especially with the emergence of advanced synchronous technologies allowing increased and personalised communication among students and between students and their instructor.

Thus, it can be concluded that with each succeeding generation and even after the outbreak of COVID-19, there is an improvement in the quality of the means for two key elements of DE: methods of presenting the content and student-teacher interaction. This does not mean that each previous generation is eliminated by what follows; many examples of first- and second-generation systems and technologies are still in use (Garrison et al., 2003). In this respect, along with these technological affordances come new models of DE (Anderson, 2008) and accordingly, new ways of defining DE.

Regardless of its historical evolution, DE has always been ideal for learners who are financially, physically, or geographically not able to obtain traditional education (Gunawardena & McIssac, 2004) or have unpredictable schedules (Bates, 2005). After institutions and authors in the educational fields began to recognize the potential of DL alongside the evolving use of technology in education, the definition of DL started reflecting the shift from being a support delivery system to "an organised instructional programme in which teachers and learners are physically separated" (Newby et al., 2000, p. 210). Later, the definition of DL began to embrace more technologically oriented educational approaches such as online collaborative learning, technology-mediated learning, web-based learning, and virtual learning, which to Conrad (2006), all fall under the umbrella of DL. Even though there is convergence in the use of technology between classroom-based teaching and DE, DE remains a dynamic and distinct form of education (Bates, 2005).

In conclusion, whether it is seen as an improved educational system compared to the traditional face-to-face (King et al, 2001) or replication of the traditional "teaching by telling" over distance and time (Dede, 1996, p. 4), "technology is a critical element of distance education" (Bates, 2005, p. 5). Hence, given the gap in the literature that uses the three terms of e-learning,

online learning, and DL interchangeably when addressing remote delivery, the term online DL used in this study reflects a comprehensive educational delivery model that embraces online learning which supports flexibility and accessibility and enhances the learning experience with the use of electronic materials which is the case of e-learning.

3.2.2 Theories of Distance Education

From its outset and prior to the COVID-19, serving non-traditional learners was what differentiated DE from traditional education. Although DE is often misconstrued as a form of traditional education augmented by information and communication technology, it has different philosophical and theoretical foundations as well as methods of practice (Saba, 2016). Knowing the theory, therefore, is indispensable for researchers and "very valuable for everyone who wants to practice in distance education" (Moore & Kearsley, 2012, p. 205).

Influenced by the prevalent pedagogies and technology of their time, several theories were suggested for the purpose of describing the fundamental characteristics of DE such as liberal, individualising independent study (Wedemeyer, 1981), two-ways communication (Baath, 1982), industrialised form of teaching and learning (Peters, 1983), theory of guided didactic conversion (Holmberg, 1983), normative teaching theory of DE (1985), theory of transactional distance including its concepts of dialogue, structure, and characteristics of each learner (Moore, 1990, 1991), (to name a few). However, Keegan (1995) and Saba (2003) agree that DE theories can be divided into three categories. The following are definitions for each category of these theories.

1. *Theories of industrialization of teaching:* How the field of DE operates and its organisation were the main focus of DE theorists like Peters, Keegan, Garrison, and Anderson who have focused on structural concerns and issues and how they influence the teaching and learning process (Saba, 2003). Generally, the industrialised perspective of education (Peters, 2007, 2010) informs the dominance of organisational changes and issues such as the division of labour, mass production and distribution of instructional learning materials, significant use of technical media to cater for large groups of students (Peters, 2010) and the need to decide between interaction and independence as Garrison (2000) highlights, however, he also adds that the emergence of computer-mediated communication made it possible to combine both.

2. *Theories of interaction and communication*: Keegan (1996) explains that this category focuses on the constructs of interaction and communication as important elements in DE and was built on the ideas of Daniel, Baath, Smith, Stewart, and Holmberg. Although the non-contiguous communication is typical of DE, Holmberg's (1983, 2007) theory of

teaching-learning conversations indicates that the learners' interaction with the pre-produced course and media (i.e., written or telephone) interaction with their teachers simulates constant interaction, "or conversation" which means that DE courses and non-contiguous communication are seen as conversational instruments, similar to interactions between students and instructors (Diehl & Cano, 2019, p. 24). In contrast to the theories that promote the importance of independence and autonomy in DL, these personal communications between instructors and learners in DE simplify the formal academic texts and use empathy and conversation as study supplementation (Diehl & Cano, 2019).

3. *Theories of independence and autonomy:* The centrality of the learner in the educational process is one of the distinguishing characteristics of DE (Saba, 2003). Relatedly, theories of DE developed by Holmberg, Wedemeyer, Delling, and Moore were based on the idea of viewing the learner as the centre of the educational process (Saba, 2003). However, for Peters (2007), self-direction and self-motivation are viewed as a goal of education and that DE already requires a substantial amount of intrinsic motivation and self-regulation (Holmberg, 2005; Pelikan et al., 2021; Peters, 2003; Peters, 2009).

Although reviewing these ideas was important for understanding the organisation and dynamics of DE, more concrete ideas as to how to organise and evaluate DE were needed and this is where Moore's theory of transactional distance comes into play which bridges between the ideas and theories of Wedemeyer, Petters, and Holmberg and develops a theoretical foundation of DE (Moore, 2013). While the other theories focus on approaches to the learning process, Moore's (2007) theory is more concerned with understanding teaching and learning in separate locations including what causes the communication gap between the learner and the teacher in a DL setting; i.e., transactional distance and how to reduce it. Therefore, it particularly informs this research study in terms of understanding communication in DL. Accordingly, Moore (2019) explains transactional distance as follows:

> The "transaction" in distance education is the interplay of the behaviours of teachers and learners in environments in which they are in separate places and have to communicate through technology. It is this separation between learners and teachers that necessitates special "patterns of behaviour" in how content and teaching are organised in courses and programmes—that is their structure—and special "patterns of behaviour" in how teachers interact with learners when using communications technologies in the tasks of creating knowledge—that is, through dialogue. (Moore, 2019, p. 33)

Thus, the educational exchange that takes place at a distance is known as transactional distance and the interplay between the three key variables of dialogue, structure, and learner autonomy is what determines the effectiveness and efficiency of the interaction in learning environments which, in return, is influenced by a psychological dimension of connectedness (Shearer & Park, 2019). To be more specific, Moore (2007) clarifies that the transactional distance is a non-geographical measure that indicates the degree of connectedness between the teacher and the learner which, in return, is determined by the balance between three constitutive concepts: structure, dialogue, and autonomy which are also called "macro factors" (p. 90). To learn more about these key variables, the term *Structure* relates to the organisation of the teaching programme including educational objectives, teaching strategies, and evaluation methods to gauge progress or the need for remediation. The design of the teaching programme might be strictly structured according to a carefully scripted plan to ensure the participation of each student leaving little room for deviation from the designed plan and shrinking the degree of freedom that was given to students to articulate their own learning objectives or finding their own paths through the content and so not being responsive to individual needs and preferences (Moore, 2019). *Dialogue* refers to a constructive interpersonal interaction directed towards a new understanding and improving knowledge (Moore, 2019). Additionally, numerous factors determine the extent and nature of dialogue such as the number of students but overarching all is the structure of the course of instruction. Other determinants of the extent of dialogue include the medium of communication, the subject of the course, the personality of students, culture and language. On the other hand, complying with the concepts of adult learning and self-directed learning (Section 3.1.1), *learner autonomy* refers to the learner's ability to manage his/her engagement with varying degrees of teaching procedures including deciding what to learn, how to learn, and how much to learn (Moore, 2019).

As a synthesis of these leading ideas of DE, each category attempted to show DE as a form of "independent study" (Wedemeyer, 1971), "industrial production" (Peters, 1994), and as "a guided teaching-learning conversation" (Holmberg, 2007). However, Moore's "transactional distance" which was built upon these ideas and which emphasised the analysis of DE in terms of structure and design has been used extensively as an analytical framework for defining and understanding DE from a pedagogical point of view. While the degree of interaction between the three macro factors determines the transactional distance between the teacher and the learner, empirical research on the validity of this theory is lacking and the relationships of the constructs have not been fully tested (Delgaty, 2018). Findings also indicate that the theory

appears to be limited to a single proposition, i.e., when the amount of dialogue decreases, transactional distance increases (Gorsky & Caspi, 2005).

These theories however symbolise a sampling of theoretical foundations that inform this research. It mainly attempts to establish a constructive conversation between students and promote a social construction of knowledge, as framed by Vygotsky, that is supported by synchronous technology which avoids the industrialised approach and enhances students' management of their learning in a social setting where they are the ones who decide "what to learn, how to learn, and how much to learn". The concept of transaction will be further detailed through other interaction models in an attempt to visualise the transactional distance among learners themselves (Section 3.4).

The following section represents an attempt to explain the affordances of computer-mediated communication and particularly in DE.

3.3 Affordances of Computer-Mediated Communication in Distance Learning

The use of technology in DE has undergone several changes throughout history. The advent of computers in the early 1980s has allowed more flexibility encouraging collaborative learning strategies and rendered computer-mediated communication and remote collaboration an unexceptional norm as an educational modality for distance and open education (Parke et al., 2017).

Computer-mediated communication (CMC) can be defined as communicative transactions occurring through the use of two or more networked computers (McQuail, 2005). This means that it functions as a mediating agent in the collaborative construction of meaning within an online community (Lander, 2014) as its attributes and affordances are said to include socio-affective benefits, messaging which encourages verbalisation and articulation of ideas, and 'reduced socio-physical discrimination' (Harasim, 2000, p. 50, as cited in Lander, 2014).

Understanding the net-based e-collaborative knowledge construction offered by chat environments, which implies that participants are separated physically, and communication is mediated by chat tools via the internet, requires gaining insights from analysing these chats or conversations that take place in this particular setting of computer-supported collaborative learning (Oehl & Pfister, 2010).

Social media, email, bulletin boards, discussion forums, blog posts, audio-visual chats, and video conferencing are considered to be some forms of CMC (Mason & Carr, 2021; Riordan et

al., 2018; Romiszowski & Mason, 2013; Shufford et al., 2021) which can be broken down into two categories: synchronous and asynchronous communication. An asynchronous mode of communication affords individuals time to craft personalised and unique messages to the receiver, while having a strong degree of control over their own self-presentation and this can be through certain CMC technology (e.g. messenger apps, social media, and text messages) which can be used to send messages at any time from any location without having to connect to the internet at the same time, whereas a synchronous mode of communication refers to the ability to chat via phone call or video synchronously permitting synchronous conversations which allow individuals to see and hear one another in real-time using other CMC channels (e.g. Facetime, Skype, and Zoom) (Shufford et al., 2021). Relatedly, Watts (2016) notes that the traditional method for engaging students in their DE courses has been asynchronous interaction, but synchronous media have become an increasing focus for engagement in online courses as technology has evolved and especially under the recent transition to online learning due to the COVID-19 pandemic in that most research associated with student-student interaction in online environments have been focussing on audio-visual synchronous settings as a solution to the lack of physical proximity but mostly of language learning nature (e.g. Pavlov et al., 2021). Therefore, more research is needed to fill the gap in the literature related to the affordances of online audio-visual synchronous environments and the use of this mode of communication to maximise the students' DL experience in different discipline contexts, which is the aim of this study. However, this approach does not only provide learners with an interactive experience, but it is also found that a blend of asynchronous and synchronous modes of interaction are seen as optimum to support student learning online (Moorhouse & Wong, 2021). Similarly, Bates (2005) has found that a combination of these two modes of online delivery is preferable to students (p. 189) and it also fosters their satisfaction with course requirements (Johnson, 2006).

3.3.1 Online Asynchronous Communication

Historically, asynchronous interaction has accounted for the majority of contact students had with their instructors and peers in DE (Hrastinski, 2008). The convenient aspect of asynchronous communication is the flexibility that provides anytime and anywhere online learning (Buxton, 2014). Indeed, flexibility can allow more time for learners to read, reflect, and review their contributions before posting however, there is another type of engagement in the process of reading and reflection on the discussion board without leaving a mark, and these acts can be referred to as "pedagogical lurking" (Dennen, 2008, p. 1624).

Email and discussion boards are largely asynchronous in nature allowing the instructor to play the role of a facilitator between students (Hrastinski, 2008). Another component of asynchronous interaction includes pre-recorded videos which allow students to view media on their own time (Griffiths & Graham, 2010). Although the use of these asynchronous technologies provides a flexible time frame for learners, feeling a part of the community may not be achieved by all students (Oyarzun et al., 2021). In line with this, the study of Onyema and his colleagues (2019) affirms that teacher guidance is crucial to simulating students' interest and participation in online forums. They argue that teachers are required to devote more time on the forum to offer feedback to pending students' queries/postings, and also to provide clarifications on trending topics being deliberated upon on the forum. This view is popular in the literature suggesting that the instructor should play an active and visible part in the discussion forum as their involvement has positive effects on the students' participation (Kearsley, 2000; Salmon, 2000). However, because the learning community is a critical feature of the online course, the instructor needs to maintain a balance between too little and too much participation i.e., instructors should not answer every student's post; instead, they should decide when it is appropriate to jump in, comment, ask another question, or redirect the discussion as too much participation by the instructor might reduce the amount of interaction among students and create a degree of reliance on the instructor (Mazzolini & Maddison, 2007; Palloff et al., 2001). Using Simonsen and Banfield's (2006) "withholding" strategy can also create avenues for learners to read contributions made by their peers, compare their knowledge, and then bring out meaning on the topic being discussed (Onyema et al., 2019). Ultimately, whether the instructor chooses to lead discussions and be the sage on the stage or to keep a low profile and be the guide on the side, both can affect student participation in surprising ways (Mazzolini & Maddison, 2003; 2007).

Students' ability to learn from asynchronous communication largely without direct intervention from the instructor has also been confirmed by the study of Kear (2004) as learning can equally occur in both informal peer support forums and more structured collaborative activities. In this regard, Yilmaz and Yilmaz (2019) suggest applying strategies such as role assignment by giving students various responsibilities and roles such as a starter, moderator, arguer, source searcher, and summariser which is found to be an efficient way of improving the quality of discussion, decreasing transactional distance (Section 3.2.2), increasing knowledge sharing behaviours, and contributing to meaningful interaction and cooperation, especially in student-student and student-content interactions. However, Kear (2004) and Rovai (2007) argue that, in a peer-support discussion, ongoing monitoring from the instructor is needed to avoid the propagation of misconceptions and maintain a supportive environment otherwise, students start having

meaningless discussions which may have a negative impact in terms of increasing transactional distance overtime (Yilmaz & Yilmaz, 2019).

3.3.2 Online Synchronous Communication

In recent years, synchronous platforms have been broadly utilised in online learning where students meet one another synchronously at the same time (Timonen & Ruokamo, 2021) and this is due to the recent improvements in technology and increased internet capabilities that have led to the growing popularity of synchronous DL (Stronska & Ostopolets, 2021).

While, in some instructional contexts, students' learning outcomes in the online asynchronous discussion such as critical thinking, teamwork, and problem-solving are reportedly superior rather than face-to-face discussion (Johnson et al., 2005; Wang, 2004), synchronous chat, which attempts to simulate face-to-face discussion, is often viewed as inferior to online asynchronous communication (McDonald, 2002). This could be because asynchronous discussions are easier to implement due to their flexible nature, unlike synchronous discussions which require login times with a set class schedule (Stronska & Ostopolets, 2021).

On the other hand, the usefulness of synchronous forms of online communication is investigated by a growing body of literature (e.g. Hrastinski, 2007; Johnson, 2006; Timonen & Ruokamo, 2021). In terms of technological and educational affordances, synchronous communication tools such as audio channels, video conferencing, and online chat rooms have the potential to provide opportunities for interactivity and real-time collaboration among students and between students and their instructor (Bates, 2005; Motiwalla & Tello, 2000) as well as the ability to emulate classroom interaction whereby instant feedback is provided (Bello et al., 2014; Lim, 2017; Yilmaz, 2015) and this immediacy, according to Bates (2005), makes it easier to establish a strong social presence (Section 3.5.1) than asynchronous learning environments. Developing social skills by establishing social presence and feeling a sense of community is also echoed in the research of Freeman (2014) who expresses concern about having these social skills such as cooperation and tolerance of diverse perspectives diminished by the asynchronous technology adding that they are "frequently short-circuited when you can just go back to the solitude of a computer screen" (p. 123).

Additionally, synchronous DE has the potential to support the development of learning communities (Brannon & Essex, 2001; Stronska & Ostopolets, 2021) as synchronous sessions provide the opportunity for learners and teachers to experience synchronous online learning as more social and avoid frustration by asking and answering questions in real-time (Hrastinski, 2007), provide a greater sense of presence and generate spontaneity (Hines & Pearl, 2004),

fostering the exchange of emotional support and supplying verbal elements (Park & Bonk, 2007) which help students feel like participants rather than isolates (Stronska & Ostopolets, 2021). In their study comparing students' discussions in the face to face and online synchronous learning, Chen and his colleagues (2015) find that in synchronous online learning, questioning, greeting, and help, as well as cognitive, social, and teaching presence (Section 3.5) are significantly higher than in face-to-face mode, they also noticed an increased level of motivation and responsibility, more in-depth learning, and richer interactions.

In their survey of educators, Brannon and Essex (2001) report that synchronous chat was useful for "holding virtual office hours, team decision-making, brainstorming, community building, and dealing with technical issues" (p. 36). The social aspects of the student-centred synchronous virtual learning environments such as fostering more personalised learning, especially in comparison to traditional classroom instruction (Racheva, 2018; Schullo et al., 2007) seem to make students more willing to interact with each other in a way that promotes the construction of knowledge (Cox et al., 2004). Additionally, when given an online space for a group of students to resolve tasks together, Freiermuth (2002) states that cultural and social barriers that tend to restrict natural conversation would be broken down enabling the less vocal to contribute their ideas in a learning environment that naturally support Vygotsky's concept of assisted performance, "understood as what the student can do with help, with the support of the environment, of others, and of the self" (Tharp & Gallimore, 1988, p. 30, as cited in Freiermuth, 2002, p. 10).

With these advantages prevailing, also comes a number of limitations associated with synchronous discussion such as difficulty in moderating large-scale conversations, lack of reflection time for students, and getting students online at the same time (Brannon & Essex, 2001, p. 36). It is argued, however, that adding a set time reinforces the perception (or reality) that the instructor and peers are providing external motivation and are encouraging participation, which can lead to increased retention and completion rates (Schullo et al., 2007). It is essential to add that the implication of synchronous learning should take into consideration the size of the group that should be small, the type of activity and students' willingness to communicate (Palloff & Pratt, 1999), the instructor's readiness for real-time improvisation, and the effect of potential cognitive overload (Kear et al., 2012). Thus, when spending time for reflection is not a requirement, it seems preferable to turn to real-time meetings as a supplement, which can be beneficial for students to plan the tasks within easy reach and get to know each other (Stronska & Ostopolets, 2021) and therefore, reduce the transactional distance. This is particularly important as this study supports the need for exploiting the benefits of

synchronous environments to maximise student-student interaction and minimise feelings of isolation.

As mentioned earlier, interaction is viewed in this context as an extended communication into online learning environments. More details are discussed in the next section.

3.4 Interaction in Online Distance Learning

One of the most widely cited definitions of interaction is that of Wagner (1994) who views this concept as "reciprocal events that require at least two objects and two actions" (p. 8) explaining that interaction takes place when there is a mutual influence between these two objects and two actions. He also adds that "instructional interactions have two purposes: to change learners and to move them towards achieving their goals" (p. 8) and this can be associated with the idea of the transformational nature of learning (Section 3.1.1) implying that prior interpretation transforms into a new interpretation via the learning process (Mezirow, 2003).

In online education, interactions can be defined as "the mutual actions between the learner and other elements of online education" (Kara et al., 2021, p. 2). Interaction does not only play a significant role in learning (Dewey, 1938; Vygotsky, 1978) but it is also an essential construct in online DL and research (Bates, 2005; Gunawardena & McIssac, 2004; Hara et al., 2000; Moore, 1989, 2019; Palloff & Pratt, 1999) and "the most important dimension of student engagement and empowerment" (Hafeez-Baig, 2007, p. 2).

In more recent literature, three types of interaction in DL are discussed: learner-instructor, learner-learner, and learner-content interaction (Moore, 1989, 1993, 2013).
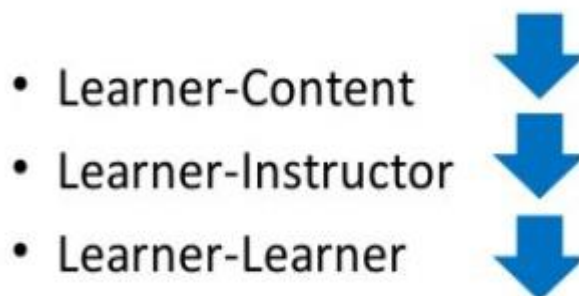
Figure 3.1 Moore's (1989) model of interaction

Later, an additional type is suggested by Hillman, Willis, and Gunawardena (1994) which is learner-interface interaction. These interactions take place at different times and frequencies during a student's academic experience. The learner-instructor interaction is the most frequently occurring interaction in educational contexts due to the students' need for a discipline expert to provide motivation and instructional direction to achieve the course objectives (Moore, 1989) as well as supporting them to understand the content using both synchronous and asynchronous communication. However, the facility of such communications often results in the rise of students' communication and their expectation of immediate responses which leads teachers to be overwhelmed (Anderson, 2004).

Learner-learner interaction is also important in online learning, especially because peer emotional support helps students feel a sense of belonging to a connected community (Ghaffari et al., 2017). While social support is typical of student-student interaction, Anderson and Kuskis (2007) argue that engaging in this type of interaction supports deep learning and the construction of knowledge. This is also echoed by Anderson (2004) who posits that "work on collaborative learning illustrates potential gains in cognitive learning tasks, as well as increasing completion rates and the acquisition of critical social skills in education" (p. 57). However, it should be noted that in small power distance educational environments such as United States, engagement in student-student interaction is different from that in large power distance cultures such as the Arab States where teachers initiate all communication and students are less likely to make uninvited interventions (Alkailani et al., 2012; see Section 2.5).

The learner-content interaction takes place when learners receive and process new information with existing knowledge and experience, thereby their cognitive structure is produced or developed (Moore, 1989). It is worth noting that this type of interaction existed even before the advancement of technology following the traditional mainstream of DE when learning was largely independent taking the form of self-management that is compliant with self-directed learning (Section 3.1.1) and dependent only on print-based materials.

However, when the content started to be delivered online, Hillman and his colleagues (1994) call for the need to examine learner-interface interaction suggesting its consideration as the first of any online interactions because the learner must interact with a communication medium in order to reach the instructor or see the content. Other researchers have drawn attention to other types of interaction; for example, Anderson and Kuski (2007) distinguish between learner-institution, teacher-institution, and teacher-teacher types of interaction. Likewise, Anderson and Garrison (1998) also expand Moore's model of interaction (1989) and embed three additional

categories namely: teacher-content, teacher-teacher, and content-content interaction as illustrated in Figure (3.2).
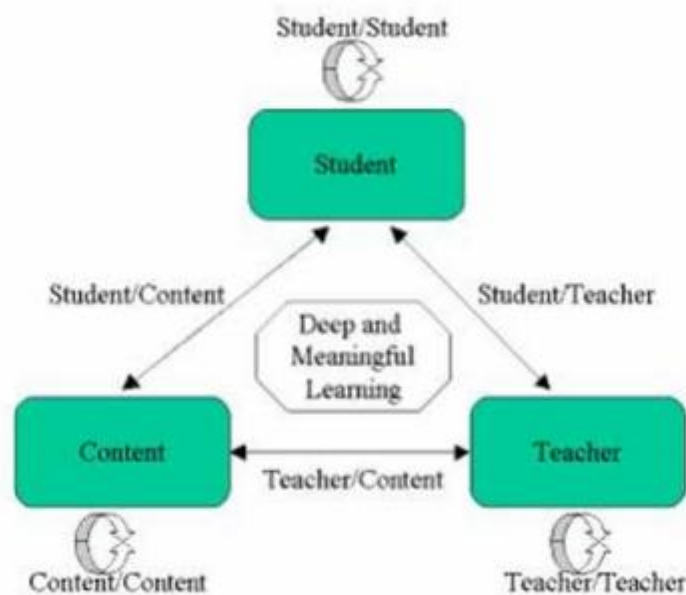
Figure 3.2 The interaction theory typology (Garrison & Anderson, 2003, p. 43)

It is, nevertheless, valuable to explain "the three types of interaction" that form the foundation of Anderson's (2004) online learning paradigm, as shown in Figure 3.3. Teacher-content interaction refers to the process that a teacher goes through when developing and implementing learning content; teacher-teacher interaction refers to the opportunity to engage in professional and social networking; and content-content interaction refers to the ability of intelligent learning resources to interact, update, and improve without the need for direct human interaction. Although these dyads may not be directly visible or felt by students, they are interactions that take place behind the scenes of education to help improve its quality (Miyazoe & Anderson, 2010). As long as one of the three types of interaction (student-teacher; student-student; student-content) is at a high level, deep and meaningful formal learning is supported. The other two may be offered at minimal levels or even eliminated, without devaluing the educational experience (Anderson, 2003a).

Other dimensions of Anderson's (2004) interaction types (Figure 3.3) include peer, family and professional support, paced and collaborative learning, communities of inquiry, and synchronous and asynchronous forms of communication which are treated equally, as both forms facilitate the collaborative learning and foster the Community of Inquiry among students and between students and the teacher. However, when it comes to students' engagement and

connection to the learning community, synchronous communication is more suitable (Wang & Wang, 2021) as it allows for improved facilitation of discussion and interactions than asynchronous communication (Martin et al., 2012).
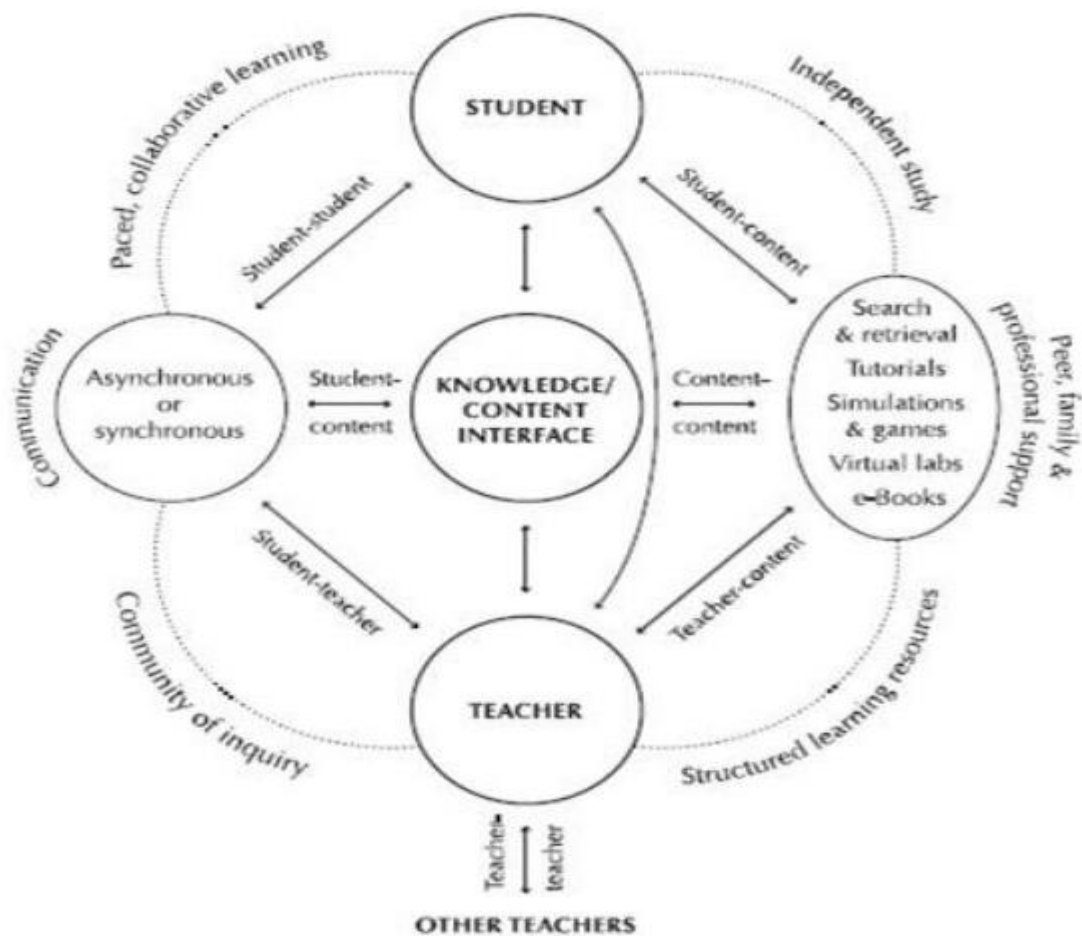
Figure 3.3 Anderson's model of online interaction (Anderson, 2004, p. 49)

While there are many different types of interaction discussed in the literature, it should be noted that the suitability of a certain type or a combination of types of interactions to the course objectives, the types of learners, and the subject matter is what needs attention the most when it comes to building a productive community of learners (Anderson, 2003b). The process of creating a community is dynamic, complex, and evolving. A community's launching and dismissal time are generally not possible to identify; however, what characterises a community is the sense of trust, respect for diverse perspectives, support, commitment for interaction and participation, and the meaningful relationships between its members (Barab et al., 2003; Palloff & Pratt, 1999; Tu, 2004).

Although Figure 3.3 illustrates the wider context of online interaction between the two major human actors: learners and teachers, and also their interaction with the content, the critical component that will inform and guide the methodology of this study is the Community of Inquiry (CoI), and which has been developed into a framework by Garrison, Anderson, and Archer (1999) for use in capturing the interaction of students and analysing online learning and teaching as in the case of this study. As previously noted in Section 1.4, this framework has been selected alongside Moore's (1989) three categories of interaction (Section 3.4) that serve as the basis of initial analysis of the interactions between peers because it aligns with this study's definition of peer interaction in that it suggests that producing meaningful collaboration requires the interaction of three key elements which are teaching presence that equals to learners' interaction with the facilitator, cognitive presence that equals to learners' interaction with the learning content and social presence that equals to learners' interaction with fellow peers.

The CoI framework emerged to respond to the need for a new theoretical perspective in the specific context of computer conferencing in HE that supports collaborative learning rather than assuming that students work independently from each other as was promoted by the traditional DE theoretical perspective (Garrison et al., 2010). Garrison and Anderson (2003) opine that a critical community of learners is composed of "teachers and students transacting with the specific purposes of facilitating, constructing, and validating understanding, and of developing capabilities that will lead to further learning" (p. 23).

3.5 Online Community of Inquiry

According to Wenger (2009), communities often start with only an initial sense of why they should be engaging and do so with modest technology resources. What distinguishes an online community of learning from other communities is the element of "inquiry" (Tolu & Evans, 2013, p. 54). This latter alongside "community" are considered critical constructs for learning and together constitute the CoI framework whose tenets, as reported by its founders, are consistent with Dewey's work on community and inquiry (Garrison et al., 2010). To be more specific, inquiry reflects intellectual academic interaction that incorporates the process of meaning construction through personal responsibility and choice (Garrison & Vaughan, 2008), whereas the construct of community denotes "social dynamics, social interaction and collaboration to create an environment to support the construct of inquiry" (Tolu & Evans, 2013, p. 54). This notion is also built on Henri's (1992) work, which focuses attention on the cognitive dimension in online learning research. It is important, however, to note that the specific context in which the CoI framework emerged was "computer conferencing in HE i.e., asynchronous, text-based group discussions rather than from a traditional DE theoretical perspective assumed

that students worked independently from each other" (Garrison et al., 2010, p. 5). Akyol and his colleagues (2009) further clarify that since CoI has been shown as relevant to contexts where face-to-face and online interaction were blended then, applying CoI to synchronous interaction is possible and this is confirmed by the growing body of research exploring CoI in synchronous contexts (e.g. Aslan, 2021; McDonald & Loch, 2008; Oyarzun et al., 2021). After that, subsequent studies started to draw on "extensive analysis and comparison of spoken and text-based CMC, as well as their effects on thinking, research on social-learning, community, social-constructivism, collaborative learning, instructional design, and distance education" (Tolu & Evans, 2013, p. 54). Additionally, while synchronous video communication can be related to diverse educational objectives and teaching approaches, the focus of the CoI, as highlighted by Themeli and Bougia (2016), is on problem-based pedagogy that is based on the indicators for cognitive presence (Section 3.5.2).

Garrison, Anderson, and Archer (1999) have developed the CoI framework as a longstanding heuristic for understanding the dynamics of teaching and learning in online formats (Park & Shea, 2020) indicating that the creation of this framework was for the purpose of building new courses from stem to stern given that its "collaborative constructivist perspective is essentially incompatible with traditional distance education approaches" (Garrison, 2012, p. 251). This framework, therefore, does not only provide a mental schema for thinking about learning and teaching in an online context (Anderson, 2008) but also provides "conceptual order and a tool for the use of computer-mediated communication and computer conferencing in supporting an educational experience" (Garrison et al., 1999, p. 87). The CoI framework can also be used as a guideline to create an effective learning environment, that is based on a collaborative and socio-constructivist approach to online education (Section 3.1.2), where students engage in well-designed collaborative learning activities and feel a connection with each other and the instructor (Tolu & Evans, 2013). Thus, the rationale for using the CoI framework is that it was "initially developed as a conceptual framework to guide the research and practice of collaborative learning in online environments" (Angelaina & Jimoyiannis, 2012a, p.173).

Given the popularity of CoI in online education research and practice broadly (Stenbom et al., 2016), and having its validity examined from various perspectives ranging from training effectiveness to cognitive load to learning outcomes to factor structure (Kozana & Caskurlub, 2018), "the first objection to the CoI framework as a vehicle for studying online learning is its conflation of paradigmatic assumptions and research methods" in that it uses an objectivist-rational/quantitative methods to validate a constructivist-based theory (Annand, 2019, p. 5). This limitation is addressed in this study by employing a qualitative approach that is

"compatible with the means by which research may be conducted within the social constructivist paradigm" (Annand, 2019, p. 5). Also, the CoI framework survey measures student perception about the learning environment rather than measuring student achievement. Thus, the CoI framework has been criticised by this lack of connection between actual course performance and the survey findings, measured only by one question about student perception of learning (Annand, 2019; Rourke & Kanuka, 2009).

Having a socio-constructivist theoretical basis (Swan & Ice, 2010; Akyol & Garrison, 2011), the CoI framework's first and foremost focus is on the process of learning and understanding how knowledge is constructed and thereby being a process model (Akyol et al., 2009) and even with having the focus consistently being on the nature of the educational transaction, the consideration of intended learning outcomes is not excluded (Akyol et al., 2009). In this regard, Rockinson and his colleagues' (2016) quantitative study has found a substantial correlation between students' perceptions of the three CoI presences and course grades whereas, in Maddrell and his colleagues' study (2017), only cognitive presence was found to be correlated to the performance assessed by the instructor. These findings imply that while student participation and cognitive presence are necessary for learning, they still need social and teaching presence. It should be noted however that the aforementioned studies share one aspect in that they compare the already existing environments with the CoI framework rather than building their courses using the CoI framework which may result in a better alignment of learning outcomes with the three CoI presences given that Garrison (2012) clarifies the incompatibility of the traditional DE approaches with the collaborative constructivist perspective. Akyol, Vaughan, and Garrison (2011) further explain the lack of cognitive achievement reported in some studies that it "reflects a weakness in the educational experience, such as a lack of teaching presence, rather than a failure of the CoI framework itself" (Themeli & Bougia, 2016, p. 148).

Furthermore, Annand (2019) argues that a concerted attention has been paid to many-to-many conversations and that the discard of contiguous two-way communication may not result in producing deep and meaningful learning. This is evidenced by the high number of studies using CoI to analyse text-based discussions (e.g. Kovanovic et al., 2015; Liu & Yang, 2014). However, using audio-visual synchronous communication in this study can address this limitation in that offering the opportunity for one-to-many and two-way conversations that mostly rely on turn taking system might better align the synchronous learning experience with the three CoI presences. Hence, quality interaction fostering discourse is necessary for deep and meaningful learning to be attained, and this requires the interplay of the three core elements of

the CoI framework, namely, social, cognitive, and teaching presence over time (Garrison et al., 2005; Arbaugh et al., 2008; Anderson, 2008, 2016; Kozana & Caskurlub, 2018). These core elements, as illustrated in Figure (3.4, reproduced here with the permission of T. Anderson, see Appendix H), "are crucial prerequisites for a successful higher educational experience" (Garrison et al., 1999, p. 87).

Given that this research views the CoI framework as a potentially supplementary method of DL and also uses this framework for the analysis of the online synchronous PL sessions, further understanding of social presence, cognitive presence, and teaching presence and the dynamics of their relationship is needed. Each of the three presences will be discussed in the subsequent sections.
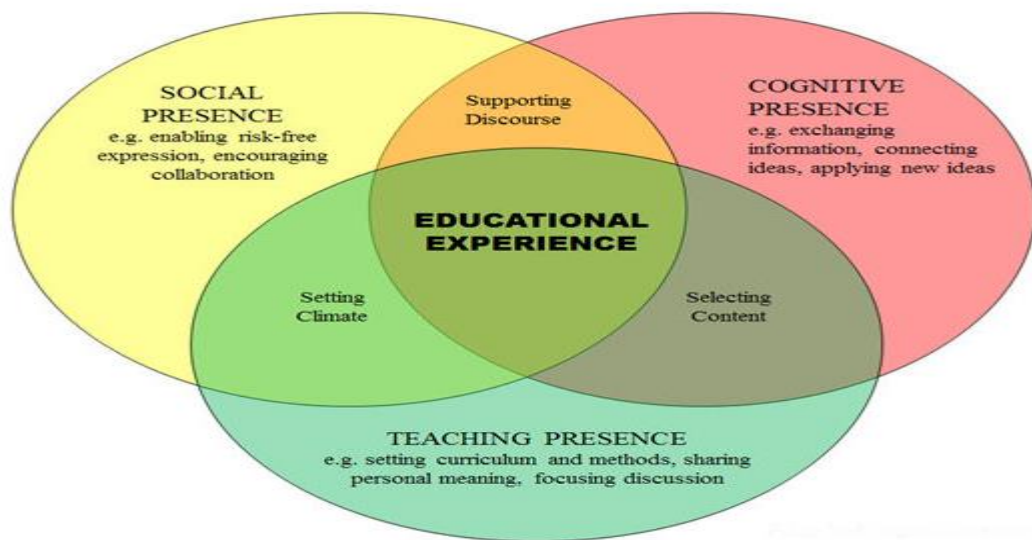
Figure 3.4 Community of Inquiry (CoI) framework (Garrison et al., 1999)

3.5.1 Social Presence

Social presence refers to the degree to which participants in CMC feel effectively connected one to another (Swan et al., 2009). The medium of communicating in which the community is working has a significant impact on social presence as it allows verbal or non-verbal communication through which individuals are able to project themselves socially and emotionally as "real" people (Akyol et al., 2011; Garrison et al., 1999; Pallof & Prat, 2007; Redmond & Lock, 2006) and also engage with their peers in a way that reduces the distance in their interactions and that is authentic (Lowenthal et al., 2017). Findings from the study of Tu and McIssac (2002) on the relationship between online interaction and social presence have

prompted defining social presence as "a measure of the feeling of community that a learner experiences in an online environment" (p. 131).

It can be argued that evidence for the effectiveness of social presence is not conclusive (Annand, 2011) because the strong emphasis on social relationships may minimise the opportunity for critical discourse to develop in an online environment and therefore harm learning (Garrison, 2011). In return, without the establishment of social presence, developing such discourse would be difficult (Garrison & Cleveland-Innes, 2005). In this regard, social presence should be more than social interactions thereby producing "personal but purposeful relationships" (Garrison & Arbaugh, 2007, p. 160) in order to enhance group cohesion and effective communication (Garrison, 2007) as well as inquiry and critical thinking (Garrison et al., 1999).

There are three indicators that define social presence: The first one is affective expression which refers to the way students project their personalities through sharing personal details, jokes, opinions, and emotions related to the online educational experience (Boston et al., 2009; Garrison et al., 1999; Shea et al., 2010). Reflecting on these socio-emotional components of communication helps students in forming interpersonal relationships and feeling a sense of belongingness (Kreijns et al., 2014). The second indicator is open communication which involves open sharing of ideas as well as a reciprocal and respectful exchange of information whereby students feel like the classroom climate as there would be recognition and acknowledgement of others' contributions, critiques, and respect (Garrison et al., 1999). Finally, group cohesion which stimulates collaboration among students involves activities that establish and maintain a sense of group commitment (Garrison et al., 2001). Learning collaboratively can be fostered when students engage in a critical, challenging, responsive and respectful manner (Garrison et al., 1999). These three key categories, together, are predictive of students' perceived learning, satisfaction, and retention in online learning courses (Richardson et al., 2017) and also provide insight into the strategies that may improve online social presence such as participants' profiles personalised with personal pictures, individualised feedback, instructor accessibility, and purposeful opportunities for learners to develop relationships through focused small group work (Lowenthal & Dunlap, 2018).

Garrison, Anderson, and Archer (1999) postulate that the function of social presence is to support cognitive presence, in that it indirectly facilitates the process of critical thinking carried on by the community of learners. Nevertheless, it is important that students recognise the affective goals for the educational process, as well as purely cognitive ones because when they enjoy the interaction in the group and find it personally fulfilling, they will remain in the

programme, and that's why understanding the function of social presence and how to incorporate its indicators is important given its direct contribution to the success of the educational experience.

3.5.2 Cognitive Presence

Cognitive presence can be defined as "the exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a Community of Inquiry" (Garrison, 2007, p. 65). This means, for cognitive presence to take place, students are required to be able to construct understanding and meaning within a community of learners through sustained discourse and reflection (Garrison & Anderson, 2003), and this is what makes cognitive presence a process model because it describes the development of higher-order thinking rather than individual learning outcomes (Akyol et al., 2009; Garrison, 2011b). It is based on Dewey's (1933) social-constructivist views of learning as well as his work on reflective thinking, and it is operationalized through the practical inquiry model (Garrison et al., 2001) which outlines four phases of the inquiry learning cycle: Triggering event, Exploration, Integration, and Resolution (see Figure 3.5). Besides, cognitive presence proved to be a suitable instrument to assess critical thinking (Garrison et al., 2001; Liu & Yang, 2014), given that oral and textual communication (e.g. via discussion forums) have been found to promote the development of critical thinking skills (Kovanovic et al., 2015).
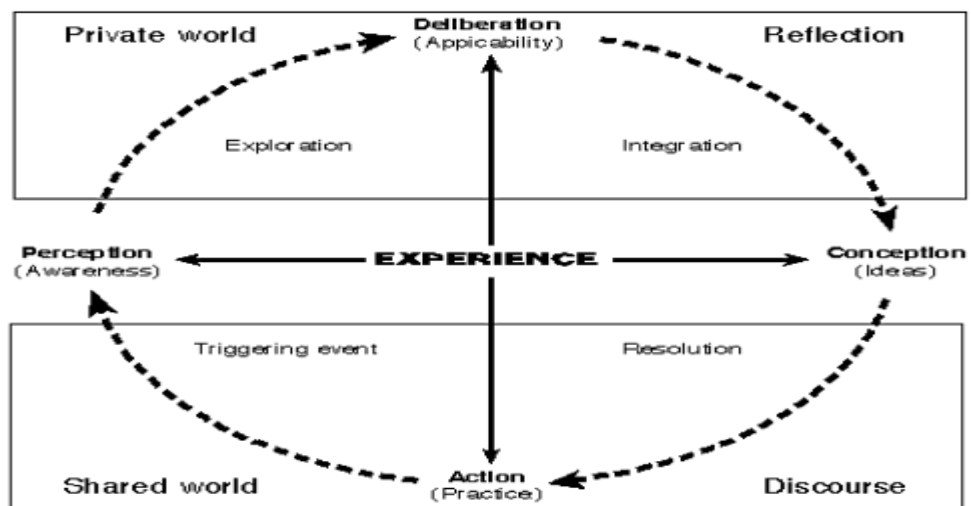
Figure 3.5 The practical inquiry model (Garrison et al., 1999, p. 99)

According to Akyol and Garrison (2010), this model is structured by two axes which are action-deliberation and perception-conception. The first axis is a reflection on practice and these two

constituents, reflection and practice, together comprise the shared and personal worlds. The second axis is about assimilating (analysing) information and constructing (synthesising) meaning. Whereas, the quadrants, as explained by Garrison and colleagues (1999), relate to the categories of cognitive presence and reflect the logical or idealised sequence of practical inquiry (i.e., critical thinking).

The first phase that initiates the inquiry process is the triggering event. This phase, as described by Redmond (2014), involves the initiation of a process of learner engagement through tasks, asking questions, and encouraging learners' sense of doubt and puzzlement. The following phase is exploration which is identified by discourse and critical reflection in the space "between the private and shared worlds" (Garrison et al., 2001, p. 10) and which focuses on brainstorming, searching for a possible explanation and relevant information after understanding the nature of the problem (Akyol & Garrison, 2010). In integration, learners start constructing meaning and making decisions on how to integrate ideas and establish order whereas, the final phase is the resolution or confirmation or testing phase that may be accomplished by direct or vicarious action, involving either discovering a contextual specific solution or reducing complexity by constructing a meaningful framework (Akyol & Garrison, 2010). If formulating a solution and applying an idea is not attainable, then the cycle of practical inquiry continues.

The issue that appears to be consistent in the research findings is that inquiry tends to have difficulty progressing beyond the exploration phase (Celentin, 2007; Garrison et al., 2001; Vaughan & Garrison, 2005). This could be related to reasons such as the role of the instructor (Celentin, 2007; Garrison et al., 2001) including providing a metacognitive commentary as to what students are doing and why and yet not dominate the discussion which is "clearly a teaching presence issue and challenge" (Garrison, 2007, p.67). Arnold and Ducate (2006) also explain that the nature of the discussion topics, questions, and activities are major factors influencing the level of cognitive activity. Accordingly, teaching presence plays a pivotal role in this regard by designing appropriate tasks focussing on online collaborative problem solving (Garrison, 2007) and providing direction and guidance allowing students to progress through the phases of the practical inquiry model (Garrison et al., 2010). Moving the discussion developmentally could be also enhanced by increasing the students' awareness of the stages of inquiry and how this relates to the task at hand (Pawan et al., 2003) in order "to complete the inquiry cycle and to prevent stalling in the early phases" (Garrison & Vaughan, 2008, p. 26). Although early studies have emphasised the instructor's role to enhance cognitive presence, the mixed methods study of Chen and his colleagues (2019) reveals that peer facilitation can also have positive effects on students' level of cognitive presence. Similarly, Garrison and Akyol

(2013) have discovered that when a formal instructor was not present, students were more engaged in self-regulating their cognitive presence. These positive results imply a need for letting students take the lead which is what this research study aims to do.

3.5.3 Teaching Presence

Teaching presence is the most critical component of the COI as it links social and cognitive presences by providing leadership throughout the course of study (Akyol & Garrison, 2010). Garrison (2007) also highlights the role of teaching presence stating that "interaction and discourse play a key role in higher-order learning but not without structure (design) and leadership (facilitation and direction)" (p.67) because "often students will be more comfortable remaining in a continuous exploration mode; therefore, teaching presence is essential in moving the process to more advanced stages of critical thinking and cognitive development" (Garrison et al., 2001, p. 10). Indeed, the absence of teaching presence and explicit guidance will make students engage in "serial monologues" i.e., discussions involving free expression of opinions and sharing past experiences, with minimal effort made to connect to the contributions of others (Pawan et al., 2003, p.119). The importance of teaching presence for successful online learning has been the focus of an extensive body of research demonstrating how it contributes to students' satisfaction, perceived learning, and sense of community (Arbaugh, 2007; Caskurlu et al., 2020; Garrison, 2007; Garrison & Cleveland-Innes, 2005; Lim, 2018; Shea et al., 2004; Varnhagen et al., 2005).

It is important, however, to note that this construct was introduced as "teaching presence" and not "teacher presence" because the act of "teaching" can also be carried out by a "more skilled peer who scaffolds a novice's learning in addition to the course instructor" (Anderson et al., 2001, p.8). In this respect, teaching presence has been conceptualised by three subdimensions: design and organisation, facilitating discourse, and direct instruction (Anderson et al., 2001).

Instructional design and organisation of an online course are time-consuming because this process takes place before and as the online course progresses and involves designing and planning the online course structure, process, the interactions between students, and assessment components (Anderson et al., 2001). Some of the activities in this category could include developing course materials and organising the course site such as preparing PowerPoint presentations, lecture notes, and audio and/or video mini-lectures, alongside creating course activities, scheduling assignments, and guiding students on how to use the medium effectively and appropriately (Anderson et al., 2001). Instructional design and organisation play an essential role in helping students to navigate the course and construct meaning from the content

which may result in higher levels of learning and an increased sense of community (Shea et al., 2006) and eventually, contributes to the success of the online course (Swan, 2003). Therefore, online discussions must be structured in a way that should not restrict the students' involvement in a meaningful online discourse (Gilbert & Dabbagh, 2005) but instead, clearly communicate their purpose and student expectations, encourages students to co-construct knowledge, and facilitates meaningful discussion (Chen et al., 2017). What is more important, however, is that the teacher needs to be more explicit and transparent in their planning process "because the social cues and norms of the traditional classroom are absent" from online courses (Arbaugh & Hwang, 2006, p. 11–12).

Facilitating discourse during the course is critical for "maintaining the interest, motivation and engagement of students in active learning" (Anderson et al., 2001, p. 7). Garrison (2007) indicates that while facilitation supports discourse with minimal control of the direction of the discussion, "discourse, on the other hand, is a disciplined inquiry that requires a knowledgeable teacher with the expectation that discourse progresses in a collaborative constructive manner and students gain an awareness of the inquiry process" (p. 67). In fulfilment of the facilitation of discourse role, the teacher regularly reads and provides feedback to students' postings (Anderson et al., 2001), shares meaning, works to achieve consensus and understanding, and check the efficacy of the process (Miller et al., 2014). Although the teacher is the subject expert who is in a position to move the discussion along and ensure effective and efficient use of time (Anderson et al., 2001), facilitating discourse, however, can also be performed by a fellow student (Garrison et al., 1999). Therefore, encouraging peer interactions within facilitation discourse requires the instructor to model appropriate behaviours, match students with similar ideas to elicit conversations, and provide opportunities for peer-to-peer interactions (Anderson et al., 2001; Richardson et al., 2009; Stewart, 2017).

Direct instruction involves the "use of the subject matter and pedagogical expertise of the teacher" to scaffold students to construct their own knowledge (Anderson et al., 2001, p. 8). The model of "apprenticeship in thinking" (Collins et al., 1989; Rogoff, 1990) and Vygotsky's (1978) scaffolding analogies can best describe the role of teachers in providing instructional support to students from their position of greater content knowledge (Anderson, 2008). According to the CoI framework, direct instruction can be achieved through facilitating discourse and reflection by presenting content and employing various forms of assessment and feedback (Anderson et al., 2001). This subject matter expert is expected to give direct instruction by interjecting comments, introducing students to information resources, and organising activities that allow students to construct the content in their own minds and personal

contexts, providing annotations of the scholarly work of others alongside responding to technical questions (Anderson, 2008).

Although facilitating discourse and direct instruction are closely connected (Budhai & Williams, 2016), what makes direct instruction a distinctive component of teaching presence is a content expert who can provide students with additional materials relevant to the course material and recognize content-related misconceptions unlike facilitating discourse that can be performed by anyone with facilitation skills and training (Arbaugh & Hwang, 2006).

Ultimately, Garrison and Vaughan (2008) note that these categories are progressive, as are the categories of the previous elements, and they do not reflect static categories. They further explain that "although the categories are always present (e.g. planning occurs throughout the educational process), the different categories take precedence as the inquiry process moves from planning to establishing and sustaining reflection and discourse" (p. 24). Thus, these unique characteristics of teaching presence, when studied, could offer worthwhile insight regarding the moderation of online communities and the inquiry process especially when using a peer facilitator to perform these tasks as the case of this study. Given that the leadership role of teachers can be "performed by anyone in a CoI" (Garrison et al., 2000, p. 89) alongside the reported relevance of this framework in collaborative constructivist learning environments where the focus is on how to construct knowledge (Akyol et al., 2009), this research attempts to apply this framework to examine the nature of peer interaction in Skype synchronous sessions taking into account interaction between the three aforementioned presences. The next section, therefore, attempts to explore the literature on PL and its implementation in an online setting.

3.6 Online Peer Learning

Much convincing evidence from studies have indicated that when "students are asked to discuss the answers with other students, their understanding of the material increases more than if they did an active learning component on their own" (Bonwell & Eison, 1991, as cited in Coetzee et al., 2015, p. 1140). Similarly, the longitudinal study of Astin (1993) suggests that students may be more motivated to exert effort if they know their peers will scrutinise their work, and they may also understand course content more deeply if they are involved in helping teach it to fellow students (as cited in Coetzee et al., 2015). Hence, encouraging study groups for PL which involves using teaching and learning strategies that allow students to learn with and from each other without the immediate intervention of a teacher (Boud et al., 1999) is considered to be one of the ways to put social constructivism into practice, decrease transactional distance, and increase student-student interaction in online DE contexts.

Generally, the online PL strategy is widely used in western HE (e.g. the University of Derby in the United Kingdom and the University of Southern Queensland in Australia). However, implementing this approach in developing countries' HE is an under-researched field with much still to discover. Despite the fact that there is a growing body of research into online PL and evidence illustrating the importance of this practice, there is still much to learn about how to effectively apply and administer such a strategy and which practices are optimal. Thus, it is important that a greater understanding of student engagement in PL in the online context is developed.

3.6.1 Defining Peer Learning

Peer learning (PL) has a long history and it's likely as old as any form of collaborative or community action. Whether occurred sometimes implicitly and vicariously or explicitly and deliberately, PL probably has always taken place (Topping, 2005). However, what this study is concerned with is the explicit and deliberate PL. The term "peer learning", according to Boud (2001), suggests "a two-way, reciprocal learning activity" as it involves notions of interdependence and mutual learning where students share knowledge, ideas and experience in a setting that is often constructed by the students themselves (p.9).

While to learn means to acquire knowledge and/or skill by study, experience, or teaching, a peer means an equal in standing or rank, a matched companion (Onions, 1978, as cited in Topping & Ehly, 1998). The concept of the peer has been popularised to social groups with equal or similar identifications and grades, which come from the same or similar backgrounds and pursue the same or similar objectives (Gaofeng & Yeyu, 2007). It follows that PL is:

> The acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. It involves people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing. (Topping, 2005, p.631)

Other terms which are often used interchangeably in the literature to refer to PL include collaborative or cooperative learning, peer tutoring, peer coaching, peer-assisted learning, and peer-centred learning. There is no one PL strategy as any strategy involving the collaboration of peers in a learning situation could be named "peer learning". Besides, all PL practises have common ground and present some forms of student interaction with their peers; however, the design of activities and the methods applied to the process have different characteristics. As a case in point, the use of peers was not only confined to the aid of the process of learning but was also integrated into other roles such as feedback and assessment. While peer feedback can

be used as a formative exercise, peer assessment may cause problems with formal grading since peer pressure may lead to more lenient marking than would otherwise be the case with a teacher (Falchikov, 2001).

Other PL practises that have employed scenarios when grading the learner or assessing skill transfer were not required including peer tutoring and cooperative learning. In fact, cooperative learning and peer tutoring are "the longest established and most intensively researched forms of peer learning" (Topping, 2005, p. 632). These two frameworks stood out from the others, even though there has been some debate over the best framework that details the best way to manage PL (Duran, 2010). Topping (2005) posits that PL can consist of cooperative learning, that is more than students working together as it has been described as building positive mutual dependence in small groups of heterogeneous learners in the pursuit of a shared goal or output. Peer collaborative learning has been historically embedded into education (Arendale, 2018) and it is also proven that it provides a variety of educational opportunities as its supportive format encourages discussions and questions that lead to conceptual understanding; students also learn to communicate more effectively and to work in teams since they prefer feedback from their peers, as it may not seem as critical and provides an opportunity for equal dialogue and the desire to want to learn more (Cho & Cho, 2011).

Peer tutoring, on the other hand, involves one student acting as a tutor and guiding the work of his peers following a highly structured protocol established for peer interaction such as focusing on curriculum content and clear procedures for interaction (Topping, 2005). Two types of peer tutoring are distinguished by Topping and his colleagues (2017): cross-age and same-age tutoring. Cross-age tutoring is a PL strategy that involves older students tutoring younger students whereas, in same-age peer tutoring, all participants belong to the same level and the 'student' and 'teacher' in a pair will exchange roles so that each play both parts in the discussion (Duran, 2010). Although cross-age tutoring is more commonly used, same age tutoring can also be effective (Duran, 2010). The study of Alegre and his colleagues (2019), for example, concludes that implementing same-age over cross-age tutoring, during programmes of less than 8 weeks, in sessions of less than 30 minutes is optimal for improving students' academic outcomes. Thus, the age difference does not matter as much as the difference in skills between the helper and the student (Duran, 2010), meaning that, in some situations, the peer helper is of unequal or different status and is in a position to pass the skills that he/she has developed. In other circumstances, the peer helper may be at the same level but could be acting in a mode of critique to provoke deeper understanding. Regardless of the variety of roles that are used in PL, "many situations of peer-learning contain elements of both the co-operative, same status

arrangement, together with the ability to add extra knowledge or insight to the other peer or peers" (Thomas, 2003, p. 45).

These concepts related to the operational implementation of PL are similar to Black and MacKenzie's (2008) "horizontal" and "vertical" types of peer support. Predominantly, horizontal peer support is characterised by students supporting one another within the same year whereas, vertical peer support utilises student support from the year above. The focus of both approaches is to create safe, friendly places or "learning communities" (Tinto, 2006, p.4) which are fundamental to realising both the tangible and intangible benefits of PL practises (Green, 2011).

While all types of PL influence academic fulfilment in positive ways (Topping, 2005), there has been a lot of interest, recently, in deploying helpers whose capabilities are closer to those of the helped, "so that both members of the pair find some cognitive challenge in their joint activities. The helper is intended to be "learning by teaching" and also to be a more "proximate and credible model" (Topping, 2005, p. 632). Similar to this approach, this research is also concerned with the peer facilitation that naturally emerges in an online setting between students from the same DL cohort. However, unlike many researchers who formally assigned facilitative roles to students (e.g. Hew & Cheung, 2008), the role of the peer facilitator in this research is applied on a voluntary basis.

3.6.2 Impacts of Online Peer Learning

Consistent with Vygotsky's ZPD, PL places a high degree of importance upon socialisation as this latter provides a context in which the extent of abilities and skills that could be achieved through peer interaction surpasses what can be achieved alone (Vygotsky, 1978). While the positive effects of PL in a face-to-face setting are well documented (Evans & Moore, 2013), several studies on online or computer-aided PL also have documented the beneficial effects of peer interaction highlighting its ability to promote collaboration and knowledge construction (Anderson, 2003a; Jin, 2005). For example, the research conducted by Fredericksen and his colleagues (2019) finds that there is a correlation between higher levels of peer interaction and higher levels of perceived learning and such results indicate that interaction with peers in online learning contexts contributes significantly to perceived learning. Gašević and his colleagues (2015) also find that using facilitated regulation scaffolding and computer-supported collaborative learning with role assignment in student-to-student discussions can achieve high levels of cognitive presence (see Section 3.5.2).

PL is mutually beneficial for both students who lead PL activities and student learners (Bugaj et al., 2019; Keenan, 2014). On the one hand, PL supports students' personal development, enhances relationship building and the mastering of interpersonal competencies (Duran, 2010), it also helps students develop a greater multicultural understanding and acceptance (Wessel, 2015), and optimizes socio-emotional and transferable skill gains such as listening, explaining, questioning, summarizing, speculating, and hypothesizing (Lim et al., 2020; McLuckie & Topping, 2004; Topping, 2005). This leads to an increase in students' confidence, self-regulation and self-management (Keppell et al., 2011; Zheng & Zhang, 2020), academic satisfaction (Coffman & Gilligan, 2002), improved learning, understanding of course material, and academic performance (Donahue, 2004; Keenan, 2014; Kuh et al., 2005; Mohammed et al., 2015), as well as persistence and retention (Braxton, 2002; Cuseo, 2010; Keenan, 2014).

Peer leaders or helpers, on the other hand, also benefit from this strategy and are able to improve and consolidate their own knowledge and experience. The cited benefits for leaders tend to emphasise the development of a range of personal skills such as self-esteem and interpersonal effectiveness, empathy, awareness, and confidence (Keenan, 2014; Wei et al., 2007) as well as professional skills such as communication, leadership, decision-making, organisation, and teamwork skills (Keenan, 2014). Joseph Joubert's phrase, "to teach is to learn twice" describes best the benefits of being involved in PL to students who act as peer facilitators (Ashwin, 2003) as this can enable them to gain a deeper understanding of the subject and the self "as learner". In general, PL enhances cooperative learning, increases knowledge and understanding, and encourages the development of critical thinking skills (Falchikov, 2001; Roberts, 2006). Thus, social and emotional benefits appeal as much influence as cognitive benefits (Topping, 2005).

The benefits of offline PL can be equally applied to synchronous PL which may include the provision of feedback and a feeling of support, overcoming isolation, being less intimidating (and therefore more inclined to ask 'stupid' questions), and aiding motivation by reassuring students (Huijser & Kimmins, 2006; Huijser et al., 2008). In addition to student dynamics, PL strategies foster the desire to want to learn more through an equal dialogue (Hamilton-Hinch et al., 2021) in that any social divisiveness according to perceived ability and status is avoided (Topping, 2005).

3.6.3 Concerns about Online Peer Learning

Capstick's (2004) study identifying potential shortcomings of PL in HE reports that students perceived this strategy as not necessary for them, others also suggested that it was ineffectual as "it was slow-paced, lacking seriousness or repeating previously covered work" (p. 49), and

this does not only indicate students' dissatisfaction with the content covered but also with the operational aspects of PL sessions. The role of the peer leader was also argued as it seemed to be "excessively instructive" (p. 49) which did not contribute to having a cooperative environment emerge. Other challenges were related to the provision of misleading or unhelpful advice and lack of clear structure, format or aims which resulted in the lack of productivity and interest.

With respect to its scope and value, PL is not only a feature of informal learning as it occurs in all courses at all levels (Boud, 2001), it is also unlikely that it follows the formal structures of transmission of the content of the regular taught modules of the course (Capstick, 2004). In that, PL should be used in conjunction with a variety of activities and not as a stand-alone activity to ensure that students make contributions rather than sit and passively learn (Habeshaw 1999, as cited in Falchikov 2001). Hence, the need for structure is important to avoid some of the worst collaborative learning scenarios such as "the blind leading the blind" or "pooling ignorance", or one person doing all the work (Topping, 2005).

In other settings, online participants reported that PL activities sometimes felt forced (Mathany, 2013, as cited in Watts et al., 2015) and this brings attention to a number of contextual factors that need to be considered such as convenience, ease of completion, information technology issues, and non-preferred learning methods (Raymond et al., 2016). Additionally, to encourage PL where a subject expert is not involved and students themselves do not have enough knowledge to teach others, it is essential for students to understand the aim of PL and recognise its usefulness that supplements and improves the teaching of the establishment, rather than replacing the current delivery. It is also important to maintain a supervisory role of the teacher in order to provide clear direction (Ayaz, 2014). Thus, "with PL, the more transparent and planned the process for students, the more effective and satisfying their experience is likely to be" (Boud et al., 2001, p. 50).

Given that the benefits of offline PL can be equally applied to synchronous PL (Huijser & Kimmins, 2006, Huijser et al., 2008), the challenges can also be the same. In their attempt to build collaborations amongst learners who are geographically dispersed using MSN Messenger, Huijser, Kimmins, and Evans (2008) report that there had been some raised questions about whether the sessions provided any added value. Also, some of the peer leaders felt inadequately prepared to moderate online synchronous group discussions, "which tested their flawed assumption that the offline moderator skills of the peer leaders would be transferable to an online format in an unproblematic fashion" (p. 56). Lastly, it was found that rapport between peer leaders and students suffered in an online format, as there was "no opportunity for face-to-

face interaction" and this was again, due to the lack of visual cues. Therefore, additional preparation for online synchronous communication should be considered which was proved to overweight the preparation for group facilitation and content monitoring.

3.6.4 Design and Implementation of Online Peer Learning

What characterises online peer groups is interactivity and sharing of knowledge collaboratively between peer learners; however, "the ways in which learners may be expected to interact in an online course room can vary depending upon the strategies used to achieve collaboration" (Kaiser, 2011, p. 24-25). To be more specific, generally, the implementation of the PL strategy entails dividing the class into small groups and assigning a group leader to each group of peers; however, some PL practices adopt a peer tutoring strategy whereby peer tutors are desired to be (slightly) more knowledgeable and confident than their peer group in relation to the subject material that would be covered in the PL sessions (Tariq, 2005), while others use peer helpers who do not need to be amongst the "best students" to facilitate the learning of their peers (Topping, 2005, p. 631-632). Regardless of the level of the peer leader, what is important is learning throughout the process and the self-improvement of peer leaders who continuously learn and practice monitoring and group management skills (Arendale, 2018).

As previously noted, PL strategies are practised by students in one way or another. To a more or lesser extent, students have always involved in informal PL (e.g. when completing assignments, through providing help and advice to one another during practical classes, or during examination revision) (Tariq, 2005). The real power of the informal environment in enhancing PL lies in its allowance for a more active role of students in planning and managing their own learning (Boud et al., 2001) and therefore deeper learning outcomes are possible because communications between peers are less threatening than those that involve supervisors or authorities (Ladyshewsky & Gardner, 2008). This is why most PL schemes focus on creating an informal environment where potential intimidatory factors, such as tutorials led by perceived "authority figures" and highly structured lectures, are minimised because peer leaders are students themselves and the emphasis is on student-centred learning where students do not only set the agenda, but also decide whether they want to participate, and how often (Huijser & Kimmins, 2006, Huijser et al., 2008).

On the other hand, Boud, Cohen, and Sampson (2001) argue that PL should be done systematically so that unfamiliar students can be conscious, improve their skills and get learning opportunities entirely. Thus, when it comes to its application in formal settings, Topping (2001) suggests that planning PL should consider the following aspects of organisation:

1. Context – considering the problems and opportunities specific to the local context.

2. Objectives – considering what will be achieved and in what domains.

3. Curriculum area – considering the discipline-specific knowledge.

4. Participants – who will be the helpers, who will be the helped, and how to match them?

5. Helping technique – deciding whether the method used should be packaged or newly designed?

6. Contact – how frequently, for how long, and where will the contact occur?

7. Materials – what resources will be required, and how will they need to be differentiated?

8. Training – this will be needed for staff first, then for helpers and the helped.

9. Process monitoring – considering the quality assurance of the process.

10. Assessment of students – considering whether any of the product and the process should be self and/or peer assessment.

11. Evaluation – finding out whether it worked.

12. Feedback – providing feedback to all participants to improve future efforts.

While these organisation aspects are proposed for an inclusive PL in a face-to-face context, implementing PL in an online setting such as the case of this study requires considering some issues specific to online learning to obtain a better understanding of the design of the online PL environments as each context can produce unique and different results, and these issues might include the following:

1. *The selection of the software*

There are a variety of tools (ICTs) that can be applied for providing students with feasible ways to carry out the activities proposed in a PL session. These tools can be synchronous and asynchronous and can also be combined to offer a richer and more flexible work environment (Sampaio et al., 2011). However, an important consideration that should be made when selecting software is the quality of the network available to students and the probable variety of devices that students will be using to participate in online PL as some may not support the chosen software (Watts et al., 2015). Additionally, while licensed packages take time to set up, even choosing open-source software might be challenging in the long term if the software is withdrawn, technical problems arise, or access to support is unavailable (Billingham, 2013, as

cited in Watts et al., 2015). Whichever option is chosen, peer-only access needs to be ensured to maintain the confidential and safe space required for peer collaborative learning (Best et al., 2011).

2. *The training of the online peer leaders*

Online peer leaders are expected to be enthusiastic, academically able to provide assistantship, possess personal attributes and interpersonal skills (Tariq, 2005), and most importantly being familiar with online communication tools. For example, Beaumont and his colleagues (2012) select peer leaders for their pilot programme based on an assessment of experience and knowledge of Skype alongside other qualities such as enthusiasm and resilience to deal with the potential problems that may occur. However, the application of PL in online synchronous settings still needs evidence that would better inform the design and planning of training, and this includes training on software features, interaction skills, and session management that is necessary to meet diverse needs; thus, training could be tailored to ensure better use of time (Watts et al., 2015). Also, the provision of guidance and training to the peer leaders should be based on their role and the PL strategy as some PL methods require compulsory participation whereby peer helpers are required to be more intensively and consciously active in the helping role (Topping & Ehly, 1998), while others are voluntary and peer helpers are self-selected. In both cases, peer leaders should be well informed about the role attributed to them which is different from that of a professional teacher in that their role in online discussions is not to impart any new knowledge but only to provide help to others and simultaneously learn on their own, this help may include establishing ground rules in the introduction phase, engaging other peers by questioning, sharing opinions/experiences, showing appreciation, and monitoring by suggesting new direction, summarising, and personally inviting people to contribute (Hew & Cheung, 2008).

3. *Participation in online PL*

While research have attempted to gather evidence of student interest (e.g. Beaumont et al., 2012; Malliris, 2012) and areas of support for off-campus students (e.g. Pereira, 2012), it is still not entirely clear why there are low participation rates in online PL sessions (Watts et al., 2015). Thus, it is important to gain an understanding of the factors affecting attendance which may include: the voluntary and unassessed nature of PL participation (Chiu & Hew, 2018; Sakulwichitsintu et al., 2014; Watts et al., 2015), easy access to alternative online support and informal support networks, students not recognizing the need for academic peer support, informal (rumours) and sometimes false and negative promotions (Watts et al., 2015).

Additionally, other factors causing the online students' s dissatisfaction and low engagement may include technical glitches and software/hardware incompatibilities (Malliris, 2012; Watts et al., 2015), reluctance to learn new software (Mathany, 2013, as cited in Watts et al., 2015), finding visual representations "uncomfortable" (Beaumont et al., 2012, p. 25), access and "cumbersome registration procedures", "unappealing and difficult to use software", and "unpopular" scheduling (Pereira, 2012). Therefore, understanding these factors can inform effective strategies to support students' participation in online PL.

4. *Keeping students motivated and nurturing independent learning*

Building productive and inclusive online PL discourses requires a welcoming learning community, a safe and positive learning climate where students need to participate or make contributions, listen carefully to each other, ask questions, and most importantly maintain respect. Thus, communicating these ground rules explicitly to students as well as using them help students engage and participate more actively in discussions. The type of task dealt with in the PL session also has an impact on the students' motivation in that it is critical to strike the right balance as high achievers will get bored if the task is too easy, whereas lower achievers may become disenfranchised if the task is too difficult (Tariq, 2005). Additionally, active and independent learning is constantly encouraged by PL by making students responsible for their own learning as well as that of their peers. Hence, introducing students to distributed PL early in their curriculum may result in making them form the habit of reviewing their lecture notes and reading around the topics in preparation for the PL session; some may even organise their own scheme and establish informal peer study groups (Ibid.).

5. *Size of the group and scheduling the online PL session*

Having groups that are too small can lead to question-answer style sessions whereas groups that are too big can lead to low participation rates by some participants (Beaumont et al., 2012) or to student frustration and a feeling of "discussion overload" (Kimball, 2001, p.35), so the best size suggested for a synchronous online PL group is between 6 to 8 participants (Beckmann & Kilby, 2008). This ensures the possibility of "high-quality sharing and vigorous and informed debate" (p.67). Furthermore, scheduling PL sessions is a concern both for in-class and synchronous online settings (Malliris, 2012). For the in-class setting, PL sessions are usually timetabled weekly into the curriculum, and centred around an hour of discussion and interaction (Sampaio et al, 2011) whereas synchronous online sessions require students and peer leaders to meet up at an agreed time (Watts et al., 2015) that is usually preferred to be outside office hours, especially for students who study part-time, work and study simultaneously, and/or those with

family responsibilities (Perry & Pilati, 2011); however, because everyone has his own responsibility, pleasing everyone is difficult. Therefore, it would be more convenient to render the schedule more flexible instead of having the same fixed time each week (Watts et al., 2015). Besides, some pilots report that learning activities online needed more time (e.g. Beaumont et al., 2012; Malliris, 2012), the reason for this can be the technical glitches which appear to negatively influence participants' satisfaction with the sessions (Watts et al., 2015).

3.6.5 Researching Peer-Produced Community of Inquiry in Online Synchronous Settings

This review of literature reveals that scholarship regarding peer interaction in communities of inquiry frequently refers to the teacher's role in organising and moderating peer facilitation activities and often relies on asynchronous communication or a combination of synchronous and asynchronous communication, whereas peer-produced CoI in a synchronous context is still under researched.

PL is more than just bringing a group of students together, it involves learners from the same group assuming roles as facilitators and directing their learning as well as the learning of their peers in order to reach a better understanding (Topping, 1996). Although there is a plethora of research discussing the important role of the teacher in facilitating and supporting group online discussions in synchronous or asynchronous settings (e.g. Brown et al., 2016; Hsieh & Tsai, 2012; Xu et al., 2020), subsequent studies have broadly confirmed that the development of a collaborative learning experience in the online discussion by instructors has been demonstrated to be detrimental to students' contribution (Hewitt, 2003). These findings reinforce Moore and Kearsley's (2012) idea of "learner independence and the possibility that distance could be a positive force, in helping adult learners, individually and in groups, to have greater control of their learning and more independence from the control of educational institutions" (p. 208). Deploying PL as a central concept, where students learn with and from each other has been demonstrated to be valuable (Armitt et al., 2002; Coetzee et al., 2015). Huijser and his colleagues (2008) report that peer interaction is pivotal to student success and retention, but what is more important is that the digital age did not diminish both the advantages of peer interaction and the feasibility of supporting such interaction, rather they have more likely increased.

When technology enables the projection of personality and presence in online learning environments, students with diverse experiences and perspectives can co-create connections to feel a sense of community while collaborating to achieve shared educational goals (Garrison et al., 1999; Gunawardena et al., 2019). However, deciding upon whether the online PL should be

delivered synchronously or asynchronously depends on the type of service offered to a particular target population (on-campus or off-campus students); for example, based on the experience of the University of Melbourne, it has been found that synchronous online PL is more suitable for institutions providing predominantly online, DE (Watts et al., 2015). Indeed, given that the potential problem of social isolation is even more acute in DE (Huijser & Kimmins, 2006), synchronous PL experience is proved to be more adequate for distance learners as it increases the degree of interaction that will eventually result in an increased social presence (Palloff & Pratt, 2007). Besides, synchronous video communication has the potential to create a sense of place or a stage where online identities perform and it also highlights recent research on audio-visual signals in communication and teamwork (Pentland, 2012, as cited in Themeli & Bougia, 2016). Even research focussing on the experience of PL in asynchronous discussion forums (e.g. Davies, 2004; Dorman & McDonald, 2005; Huijser et al., 2008) have found that rapport between students and peer leaders suffered in an online format because of the lack of face-to-face interaction which was among the most reported limitations while evaluating such programmes. However, this may not be the case in the Arabic context and particularly the context of this research due to some cultural differences such as the separation between the sexes that has been found by Al Harthi (2005) as a factor influencing Muslim female participation in virtual spaces that require physical appearance. Thus, an important thing to consider is the relationship between the cultural background and the way of perceiving or reacting to the lack of visual cues in synchronous video communication.

Additionally, applying CoI in a broader context and studying it as a place of informal, peer group interaction alongside investigating whether distance students attach importance to such form of peer interaction yet have not garnered plenty of interest from scholars. As a case in point, Regan (2013) is among the few authors who has used the CoI framework to investigate the use of peer facilitators as an educational approach which has been proved that it "could assist towards facilitating reflective online group discussion; the sharing of good practice; and creating a context to foster group collaboration and communities of inquiry" (p. 212); but again these studies mostly involve STEM and medical disciplines instead of humanities and social sciences which also demand knowledge construction through discussion groups. Regardless, since increased student engagement may lead to the development of a Community of Inquiry (Oyarzun et al., 2021), this framework is relevant in learning contexts that emphasise the process of knowledge construction and support different perspectives on reality as the nature of knowledge rather than clarifying what is right and wrong as a learning objective as objectivism does (Themeli & Bougia, 2016). Thus, collaborative constructivist learning contexts are like an ecosystem that gives space to the three presences to appear and perform. That's why it is

necessary to gain an understanding of the design of such learning environments as well as the dynamics of the three CoI core elements whose interaction results in deep and meaningful learning to take place (Anderson, 2008).

3.7 Summary of the Review of Literature

This chapter has laid the foundation for this thesis and informed this study by providing a theoretical background and information on key concepts such as distance and online learning, CMC, interactions in online learning, and online PL. The reviewed literature also calls for the need to better understand students' experiences and perceptions of CoI, PL, and interaction in collaborative and community-oriented online synchronous environments. By relying on students' reflections and by describing their experiences using Moore's model of interaction and the CoI as an analytical framework, this study focuses on understanding students' experiences and views of interacting with peers in an audio-visual synchronous environment in two DL discipline contexts whose investigation is still missing in the literature. The next chapter (Chapter 4) provides details on the study design and methods.

Chapter Four: Research Methodology

This chapter explains the research methodology used in this study. As mentioned in the literature review chapter, there is a lack of research that particularly look into the contributions that online PL using video conferencing communication make to interaction and learning in DE programmes (Section 3.6.5). Accordingly, the findings from this study will contribute to filling the gap in research by qualitatively depicting peer interaction and community building in an audio-visual environment as experienced by Algerian master's students in the course of six sessions. Hence, a case study methodology is selected for this study since the focus of the problem requires the study of human activity located in a natural setting where it can only be understood in that specific context (Yin, 2009).

By investigating the Algerian students' experiences of interaction in two different master's DE programmes (Applied Linguistics and Local Administration) delivered fully online through MOODLE and examining the processes of six online synchronous PL sessions in these two discipline contexts, this case study research is guided by the following overarching research question: How does online synchronous PL contribute to the DL experience of the Algerian master's students?

As previously highlighted in Chapter 1, this study aims to describe the experience of interaction in two master's DL programmes as perceived by students and teachers, to investigate the students' readiness and expectations of the Skype PL discussions, to describe the experience of interaction in the PL sessions, to examine the nature of the synchronous Skype peer-led discussions for the Applied Linguistics and Local Administration discipline contexts, to investigate the perception of students about the synchronous PL experience, and to formulate a conceptual model pertaining to learning in an online synchronous PL environment.

This chapter presents the methodology used for the study starting with describing the research design including the participants involved (Section 4.1.1), and the sequence of the study (Section 4.1.2). After that, the research method is introduced including the description of the instruments and procedures for data collection (Section 4.2.1), data analysis (Section 4.2.2), the validity of the study (Section 4.2.3), ethical considerations (Section 4.2.4), the role of the researcher (Section 4.2.5) and a note on issues of translation and acknowledgement of bias (Section 4.2.6). At the end of the chapter, a brief summary will be provided (Section 4.3).

4.1 Research Design

This study employed qualitative methods because they are well equipped to explore the experiences of the Algerian distance learners in a natural setting using interactive and humanistic methods (Cresswell 2003; Gillham, 2000). Qualitative research, as explained by Merriam (1998), is based on discovery, insight, and understanding from the perspective of the research subjects, providing richer explanations about the process, context, and participants than would be provided by a survey and a numerical. Additionally, qualitative research helps to dive into the participants' inner experience, to determine how meaning is developed through and in culture, and to explore rather than test variables (Corbin & Strauss, 2008). The qualitative approach mainly follows an inductive, constructivist, and interpretive exploratory mainstream that describes and considers the context where the study takes place to present a completed image of the study as well as emphasise the process and not only the final results (Bryman & Cramer, 2004). Following this line of thought, this research examines the audio-visual synchronous environment (*the setting*), the volunteered subjects studying Applied Linguistics and Local Administration (*the actors*), the Skype PL (*the events*), and the interactions within the Skype PL sessions (*the process*) (Miles & Huberman, 1994). In doing so, the researcher developed credibility and rapport with the participants while also observing passively the interactions in the sessions (Cresswell, 2003).

Since the focus of this research was on exploring the Skype PL and interactions more in-depth in a particular location (i.e., synchronous environment) at a particular time (i.e., six sessions over two months); thus, the strategies of inquiry, data collection, analysis, and interpretation are guided by the case study methodology (Cresswell, 2003). By choosing the case study from the qualitative designs, multiple methods of data collection have been employed (Cresswell, 2003; see Section 4.2.1) alongside setting out themes and issues (Stake, 1995), as this appeared to be the most suitable approach to attain the research objective which is linking the students' needs and expectations to the proposed verbal PL strategy and investigating the processes taking place and related CoI elements. Besides, as the primary interest is in "the process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation" (Merriam, 1998, p.19), it is, therefore, difficult to measure phenomena like students' interactions and perceptions about the Skype PL experience from statistical evidence since the focus of this study is on the interactive modes and processes; and "the appropriate definition and framework must be stated in terms of processes rather than in terms of quantitatively measurable operations" (Claire, 1993, p.22, as cited in Mugglestone, 2006, p. 94).

Furthermore, because this research is context-dependent that takes place in a synchronous learning environment, bounded by time (six sessions) and by a specific case (two groups of master's students learning at distance) (Cresswell, 2013), the bounding of this research is particularly consistent with the qualitative case study design. The case study has the advantage of being able to "close in on real-life situations and test views directly in relation to phenomena as they unfold in practice" (Flyvbjerg, 2011, p. 309). It particularly looks at the "how" type of question without manipulating the behaviour of the participants or disconnecting the phenomenon from the context within which it resides, having both aspects worth exploring (Yin, 2009). In addition, Merriam (1988) defines a qualitative case study as a holistic, intensive description and analysis of a social unit, phenomenon or a single entity adding that case studies are descriptive, heuristic, and particularistic and rely heavily on inductive reasoning in handling multiple data sources. Hence, in keeping with the case study design, this research employed multiple sources of data which are: interviews, observations, audio-visual recordings, and reflective logs.

However, weighing the instrumentality of the case study for this research was not enough as there was also the need to decide on which approach to the case study would best fit the epistemological orientation of this research. Although prominent methodologists, namely Yin (2003), Merriam (1998), and Stake (1995) hold differing perspectives on the utilisation of the case study method in the field of educational research and each has employed distinct terminology to define variation amongst case studies, the choice of the case study variation was guided by the epistemological orientation of the research which is constructivist inquiry or naturalistic inquiry as it is more accurately labelled today, and which balances the inquiry focus by moving beyond measurable or tangible variables to focus on the social constructions of research participants. Social constructions are those products of meaning-making, sensemaking (Weick, 1995), and mental activities that human beings engage in as a consequence of interaction with each other (Lincoln, 2007). This study, therefore, rests somewhere between the instrumental definitions of case study methodology attributed to Stake and Yin's exploratory case study, given the methodological approach is interpretive which emphasizes constructivist investigation (Guba & Lincoln, 1989).

From a Stakian perspective, for the intrinsic case study, the case is dominant; the case is of the highest importance; however, for the instrumental case study, we start and end with issues dominant, thus, the issue is dominant (Stake, 1995). Following this line of thought, this research particularly attempts to understand students' experiences and the nature of peer interaction taking place in the online synchronous sessions where the researcher rests upon her intuition

and see research basically as a researcher-subject interaction, which is compatible with the constructivist epistemology (Stake, 1995). Thus, Stake mainly thinks of the qualitative case study researcher as an interpreter and gatherer of interpretations who is required to report his/her construction of the constructed reality or knowledge that was gathered through investigation (Stake, 1995, p.99-100). Interpretative case studies, for Merriam (1988), contain rich, thick descriptions, which are used to develop conceptual categories or to illustrate, support or challenge theoretical assumptions held before the data gathering. In summary, this study explored "how" Skype PL might contribute to the DL experience of Algerian master's students with the hope that the knowledge gathered about the process of developing an online community and interacting with peers in an online synchronous environment would be valuable for the broader educational community as it broadens the frontiers of support for distance students especially those specialised in humanities and social sciences as well as supporting educational researchers to construct a roadmap that helps in using online PL or even minimise the problems in composing the peer-led activities.

4.1.1 Participants

Five universities offering master's DL programmes in Algeria were approached and only two DL departments accepted to be part of the study, Applied Linguistics and Local Administration (see Appendices S and T). This research study recorded the participation of a group of 11 volunteers from the approximate 102 distance students initially enrolled in the Applied Linguistics master's programme and 15 volunteers from the approximate 380 distance students enrolled in the Local Administration master's programme. However, of the 26 volunteers who agreed to participate in this study, only 12 students showed consistency in attending a total of six sessions. These include 5 participants from the group of Applied Linguistics and 7 participants from the group of Local Administration.

As for the reasons behind the low number of volunteers, students repeatedly identified family and work commitments as major obstacles to participating in the Skype PL sessions alongside problems of internet connection that may affect the synchronicity of online communication thus, there was almost no difference in responses according to age and gender except for some females who were not comfortable participating without the presence of the teacher and perceived the use of the webcam as being against their cultural values. It should be noted, however, that there was, to some extent, a balance of gender and age in volunteers compared to background population as all students from both DL programmes had an equal opportunity to participate in the study.

These Skype sessions represent an additional activity that was requested from students to perform alongside the programme participation requirements and, as students have opted for this DE programme for flexibility purposes, not all students were likely or willing to be available for participation in a specific time so, the volunteers were students with flexible time commitments and interest in exploring the online synchronous PL strategy. Consequently, this case study required a purposeful selection of distance students as it was anticipated that students who volunteer would sense potential advantages in being a part of a synchronous Skype session and hence be willing to commit to a scheduled virtual meeting every weekend evening.

The following inclusion criteria were used to guide the sampling process: (a) studying at the master's DL programme for the academic year 2019-2020; (b) voluntary participation in the research and (c) taking part in interviews, followed by six Skype sessions and completeness of reflective logs. Additionally, understanding how the synchronous PL sessions conducted via Skype would contribute to the online learning experience of the Algerian master's distance students was expected to be maximised by selecting willing participants to be part of the study (Stake, 1995). However, the sample of students who volunteered is not necessarily representative of all distance learners involved in the two master's programmes under study.

Alongside the volunteered students, 3 teachers representing the Applied Linguistics programme and 4 teachers representing the Local Administration programme agreed to support the researcher's understanding of the two discipline contexts including information about interactions and any related community building activities and to provide their perspectives of the Skype PL strategy. The selection of the teachers for the interview method was also purposeful to elicit responses from the right respondents who were involved in the two programmes under study.

Furthermore, the size of the Skype group was originally limited to 10 participants since it was thought that this number would offer everyone a fair chance to engage fully in the discussion (Loch & McDonald, 2007). Thus, it was previously assumed that if the number turned out to be more than 10 volunteered students in one group, another group would be formed. However, less than 10 volunteered students were attending the sessions in each group. Having two groups in two different disciplines allowed a "literal replication" of the case study to take place (Yin, 2009). Besides, using multiple case design has the advantage of allowing a greater understanding of the original case by investigating differences and similarities between the cases (Baxter & Jack, 2008; Yin, 2009).

As a passive-observer, the researcher observed and recorded the interactions of students in their own environment without conversing or interacting with participants (Brancati, 2018). This passive participation allows the researchers to be present in a particular social context but not actively involved in the activities. They observe an event and take notes without being immersed in the situation. As an outsider to the social group, the researcher gets to know the individuals and the environment and learns how to act appropriately in the setting as a contributor to the group dynamic (Siegel, 2018). Although the presence of the researcher may not be sufficiently discreet and may result in participants' changing their behaviour (Hawthorne effect), being in a position of passive observer can minimise the impact and perception of bias and allows the researcher to develop a better understanding of interpersonal motives and behaviours unlike being a participant-observer who is most likely accused of bias owing to events' manipulation (Yin, 2009). Another way to minimise the perception of bias is using multiple sources of data and providing a thick description (Stake, 1995), and this is further discussed in Section 4.2.3.

4.1.2 Sequence of the Study

This section is an extended discussion of the brief overview of the four phases of the study (planning and design, data collection, data analysis and presentation of findings) that was provided previously in Chapter 1 (Section 1.5).

Prior to the recruitment of the research subjects, the Applied Linguistics programme manager granted the researcher access to the online platform where a recruitment message was posted on the discussion forum introducing the researcher and her research study to the enrolled students in that DL programme. Whereas, for the programme of Local Administration, the recruitment invitation was posted by a teacher. This message briefly explained the researcher's purpose, expectations of participation, contact details, and reassured students that their participation is completely voluntary, and that the researcher has no role to play in their programme. It was expected that students who were interested in experiencing the audio-visual Skype PL and had time for such activity would accept to participate. Respondents were contacted by the researcher and sent the informed consent (Appendix P) in which a description of the research project, the role of the participants in this research as well as the role of the researcher as a passive observer were included. It also provided information about what benefits to expect when participating in this research, confidentiality assurances, and avenues for getting information or communicating any concerns regarding the conduct of the study. Additionally, students were informed about what they were required to do beyond participation in the Skype PL sessions (participating in interviews before and after the Skype sessions). Participants were also informed about how to set up an account to run Skype and once they formally consented

to participate in the Skype sessions and the initial interviews were conducted, an appropriate time for the sessions was discussed and a date was agreed upon to conduct a welcoming session to guide and introduce students to the functionality of Skype.

The process of data collection included conducting the initial interviews (Appendices A and E), observing and recording the twelve online synchronous sessions over a period of two months, administering the reflective logs after each session (Appendices B and C) and conducting the final interviews with individual participants (Appendix D). This process of data collection is illustrated in Figure 4.1 and discussed further in Section 4.2.1.
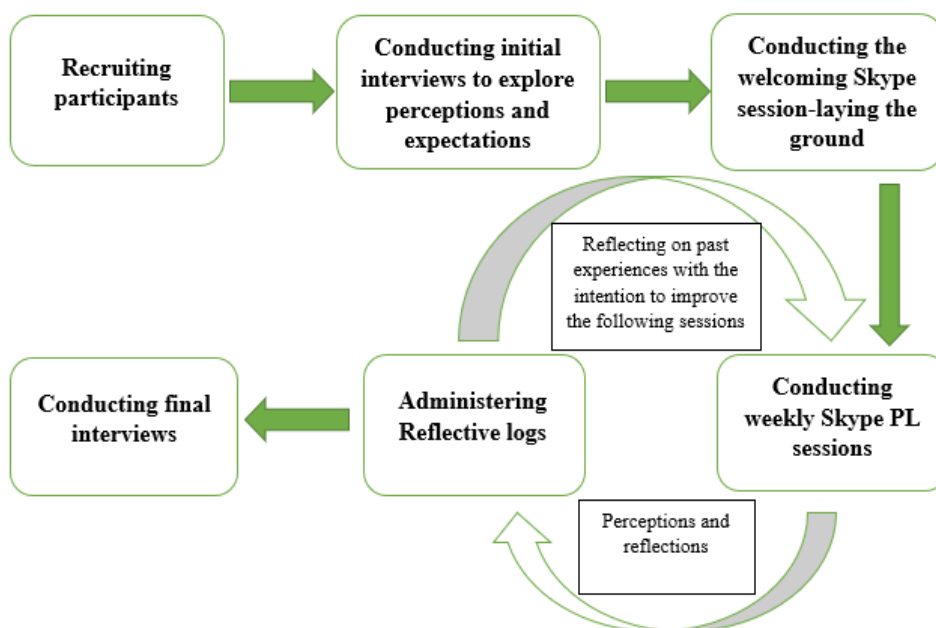
Figure 4.1 The process of data collection

The researcher, throughout the time of data collection, made sure not to report what she "wants to find" (Gillham, 2000, p.28). Knowing that the case study, at its core, is subjective, the researcher tried her best to comply with the principles mentioned by Gillham (2000) which are "researcher of integrity" who is "constantly challenging and scrutinising" himself and "detached honesty" which means acknowledging his own place in the scheme of things in an effort to "decentre from himself" (p. 28). Thus, the researcher was open and honest. On the other hand, unlike the challenge of balancing involvement and detachment in participant observation

(Takyi, 2015), one of the arguments against undisguised naturalistic observation is reactivity. This latter implies that when participants "know they are being observed and studied, they may act differently than they normally would" (Price et al., 2017, p. 121) which is also referred to as the "Hawthorne effect" however, the research subjects "often become used to being observed and with time they begin to behave naturally in the researcher's presence" (Ibid., p.121). In addition to that, participants were informed that the information collected would be confidential and that any responses utilised in this research or subsequent publication would be anonymous.

As is common in case study methodology, the phase of data collection merged into the phase of data analysis which comprised thematic coding of the responses to the initial and final interviews alongside the thick description of the online synchronous PL sessions (Stake, 1995). Furthermore, the use of the CoI framework to conduct the content analysis of the twelve sessions recordings was instrumental to the interpretations taking place within the sessions and this will be further discussed in Section 4.2.2.

In the last phase, the study findings are introduced in three chapters followed by a discussion and implications. Chapter 5 outlines the outcomes from the initial and final interviews and also identifies the common themes related to the first five aims of the study (Section 1.2). The subsequent Chapters, 6 and 7, present a thick description of the six Skype PL sessions of each of the two cases with further understanding gleaned from the CoI framework and supported by students' individual reflections about what they experienced from the sessions and how they contributed to the discussions. Following this, Chapter 8 concludes the study with a discussion of the research findings and recommendations.

4.2 Research Method

Following the case study methodology, gaining an insight into the interactions taking place in the online synchronous PL sessions was achieved through converging multiple methods of data collection and analysis. One of the best-known quality criteria and techniques specific to, or suitable for, qualitative research is triangulation (Braun & Clarke, 2013, p. 363). Indeed, triangulation allowed the comparison of the data received from all three sources for consistency (Yin, 2014). Therefore, with the corroboration of data collected from different sources (students, teachers, and observed sessions) using a variety of techniques (interviews, video recordings, and reflective logs) with their associated qualitative analysis procedures to explore the participants' perspectives and "to make sense of the setting" (Miles et al., 2014, p.298), it should be possible to triangulate the data and "maximise the validity of field efforts" (Denzin, 1978, p. 304) as well as strengthening analytic claims (Smith, 1996).

4.2.1 Data Collection

In most case study strategies, the use of multiple methods is predominant (Saunders et al., 2009). Thus, to gain a full understanding of the students' experience of the Skype PL environment, the video recordings evidence was corroborated by the students' opinions gathered through interviews and reflective logs in order to enhance the trustworthiness of the study analysis (Miles et al., 2014). In short, the multiple forms of evidence used in this research can be an asset especially when they converge and possibly play against each other to provide a valid account of the phenomena in question (Gillham, 2000; Lajoie & Gauthier, 2009) that is the Skype PL.

The data was collected electronically, and the primary means used was Skype. According to Perakyla and Ruusuvuori (2011), "face-to-face social interaction (or other live interaction mediated by phones and other technological media) is the most immediate and the most frequently experienced social reality" (p. 533). Skype was thought to be the most convenient tool to conduct interviews, especially if the students involved in this study are distance learners and meeting with them face-to-face is quite impossible. Thus, the subjects of this study were asked to provide the researcher with their Skype accounts or create an account if they do not have one. Interviews and interactions within the online sessions were recorded using the Skype recording function and were saved in a digital multimedia container format (MP4). Additionally, students were asked to fill in reflective logs after each session using a word document. Similar to the initial interviews, the final interviews were also recorded using the Skype recording function and saved in the MP4 format.

It is also worth noting that participants were given the total freedom to use any language they felt comfortable with so that they can easily communicate their thoughts and feelings in a more open way with no perplexity. Thus, the linguistic repertoire of the participants included a mixture of standard Arabic[2], colloquial Algerian Arabic [3]and code-switching to French words whenever they felt the need to emphasise specific points relating to their own experience or felt unable to explain technical matters or concepts related to their profession. However, this became challenging and time-consuming when it came to translating the transcripts into the English language which demanded the use of different translation software and multiple consultations seeking word equivalences (Section 4.2.6).

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[2] Standard Arabic is a variation of classical Arabic which has evolved with constant borrowing and innovation, demonstrating how the Arabic language has reshaped itself in response to the needs of its users (Gu, 2014).
[3] Colloquial Algerian Arabic (as known as *al-Ammiyya*) is widely used in everyday spoken casual discourse and it is connected to standard Arabic but differs depending on the speakers' social status and geographical location (Bateson, 1967).

4.2.1.1 Initial interviews

Collecting interview data is common within qualitative studies, case study researchers can use interview data because they include opportunities for clarification and discussion which are excluded through other methods (Reinharz, 1992), this provides great flexibility while interviewing which allowed the researcher to ask and rephrase questions in a format that was applicable and relevant to the situation as well as inquiring for clarification or explanation from the participants if their answer was found ambiguous or not clear. Thus, the use of semi-structured interviews in this study is supported by the exploratory nature of the research.

An initial interview was conducted via Skype prior to the start of the synchronous PL sessions not only to gauge students' preparedness for and interest in the online synchronous PL but also to expand the knowledge of the lived DE experience focusing particularly on the form and nature aspects of interaction as literature on this area and in this particular context was not found. Before the main study, the initial interview was piloted with 5 Applied Linguistics distance learners to allow this instrument to be reviewed and to evaluate and get suggestions about the accuracy, clarity and comprehensibility of the questions. The duration of the piloted interviews was similar to that of the initial interviews of the main study which ranged between 45 minutes to 60 minutes as the length of each interview was conducive to the number of probing questions asked to seek more understanding about the participants' views that required further clarification. The initial interview of the main study, therefore, collected information on the experience of online DL as perceived by students and teachers, including their views on the form and nature of interaction taking place in the two discipline contexts under study, prior experience of audio communication or video conferencing and online PL. This interview also discussed preconceptions and expectations of learning with peers in an audio-visual environment using Skype, and reasons for participating in the Skype PL sessions (see Appendices A and E). Analysis of the information obtained is detailed in Section 4.2.2.1 and results are introduced in Section 5.1.

4.2.1.2 Recordings of the online PL sessions

With the use of Skype, it was possible to record each of the six online PL sessions of each group in one complete representation. These recordings included audio and screen capture of the virtual meetings taking place. As for the messages sent on the chat box, the researcher was able to go back to them anytime when needed. Because this recording function could be used only by the one who creates the Skype group, the researcher took the initiative to create the groups of both disciplines and this was made clear to participants before the start of the sessions.

Since the researcher attended all the sessions without any participation, this study used the recordings to support the comprehensive notes taken while observing the interactions that occurred in the online PL sessions. These recordings helped so much in capturing the process of PL including the changes in the students' adaptability to this strategy and obstacles following its implementation given that it is the most suitable method of obtaining as true a record as possible of the learning process (Lincoln & Guba, 1985; Patton, 1990). Section 4.2.2.2 discusses the analysis of these data and the results of this analysis are detailed in Chapters 6 and 7.

4.2.1.3 Reflective Logs

According to Talbot (2007), to regularly reflect during learning is more likely to take control of learning. Following the welcoming session and at the end of each session, students were asked to fill in reflective logs to keep track of the evolution of perceptions and reflections on each session and at the same time, it was a form of self-evaluation of their participation, recalling what worked well and what did not work well in order for them to take a moment and think of how they could improve the next session for a better practice. The questions included in these reflective logs were open-ended questions allowing students to record their experience in learning with their peers via Skype. This self-recording method is proved to be useful when keeping track of their progression over a period of time and to gain a sense of realising the desired outcome after each session (see Appendices B and C).

In order to support the evidence collected from the interviews as well as to see how the students' sense of progress emerged, participants were asked to give feedback on learning with peers in a synchronous setting mediated by Skype, and reflections on their own and the performance of others including the peer facilitator so as to explore if the session was perceived as being at an appropriate level. Other questions that stemmed from the CoI survey instrument developed by Arbaugh and his colleagues (2008) were also asked to detect and document the perceived presences instead of relying only on the observation of the recorded sessions where these presences were only performed. Accordingly, CoI related terms were adjusted for students to better understand the questions. For example, cognitive presence was explained as "learning and understanding of the content" and "ability to construct meaning through sustained communication", social presence was rephrased as free self-expression, collaboration with others, emotional and social projection of oneself, and feeling a sense of belongingness. Likewise, teaching presence was adjusted as the ability to facilitate the learning of others. Participants were also asked to reflect on challenges encountered and "what were the outcomes of today's discussion?". These questions allowed participants to express their feelings and

thoughts and helped the researcher to obtain the broadest possible picture of the online experience under study.

It is also worth mentioning that some of these questions were posed again in the final interview to elaborate further such as: "what motivated you to participate in these sessions?" and how the Skype PL sessions contributed to their learning and understanding of the content alongside questions related to the challenging aspects and suggested areas of improvements. The same reflective log questions were therefore administered to students after each session to check the consistency of response and any change in the students' perceptions about the progress of the sessions. Hence, the study's strength was enhanced by the triangulation of evidence gathered across the period of six sessions with each group, which corroborated the same fact or finding (Rowley, 2002) or phenomena (Yin, 2009). Data analysis of this method is further explored in Section 4.2.2.1 and students' responses to each after-session reflective log are presented in Chapters 6 and 7.

4.2.1.4 Final interviews

In order to construct meaning from participants' lived experiences (McNamara, 1999), semi-structured interviews were considered most suitable to collect data about how the online PL sessions contributed to their DL experience in a conversational style by allowing the researcher to interact freely with participants and explore their views of reality (Reinharz, 1992, p.18) and in doing so, participants were allowed to make sense of their experiences through narrating their stories and be involved, as collaborators, in interpreting the course of events (Mishler, 1991). These final interviews also included open-ended questions that allowed more flexibility to respond to the specific situation and promoted new ideas (Merriam & Tisdell, 2016) with an appropriate set of probes and prompts (Brinkmann & Kvale, 2015; Robinson, 2002) in following an already prepared interview schedule (see Appendix D).

Guided by the aims of the research, the researcher attempted, through this final interview, to seek further understanding that corroborates the collected evidence from the thick description and content analysis of the recorded Skype sessions. It also included some of the reflective logs' questions, which as explained previously in Section 4.2.1.3, aim at making sense of the online PL experience by allowing students to elaborate further on their responses. Furthermore, in order to avert the likelihood of biased responses resulting from the researcher being present during the process of interviewing (Cresswell, 2015) as well as the different interpretations by the interviewer and the respondent that the interview questions may lead (Mishler, 1991), the strategy was to discuss the interview process with each participant and give appropriate time for answers without interruption except when there was a need for clarification and then a report

for each interview was produced so that the context, nuance, and innuendo can be captured (Yin, 2009). Additionally, as a form of validating this qualitative research, each participant was given a copy of their particular interview transcript in order to examine the content (member checking) and add anything that may have gone unnoticed (Lincoln & Guba, 1985; Stake, 1995; Stake, 2000).

These final interviews focused mainly on gathering the students' views about the Skype PL sessions, what impact did these sessions make on the students' overall DL experience, what challenges they were confronted with during this practice and their motive for participating in these sessions. The analysis of the final interviews data is further discussed in Section 4.2.2.1 and the results are presented in Section 5.2.

4.2.2 Data Analysis

Qualitative data analysis concerns the process of moving from the data to understanding, explaining and interpreting the phenomena in question (Taylor & Gibbs, 2010). Among the advantages of qualitative data collection is its inclusion of rich information based on social phenomena. However, the issue of bias is the most challenging aspect that can be encountered. Thus, selecting the appropriate method of data analysis can nevertheless mitigate this challenge to ensure validity and reliability and decrease the amount of subjectivity.

As noted by Merriam and Tisdell (2016), "rigour in qualitative research derives from the researcher's presence, the nature of the interaction between researcher and participants, the triangulation of data, the interpretation of perceptions, and rich, thick description" (p. 191-192). Accordingly, after translating and transcribing the data (Section 4.2.6), this study used a variety of data analysis techniques consistent with the case study methodology (Yin, 2009) and which are thematic analysis and content analysis. While thematic analysis is a method of identifying, describing, referencing and "schematizing" repetitive semantic motifs, i.e. topics arising from research data, and is a key tool for all researchers in qualitative research (Braun & Clarke, 2006), content analysis, on the other hand, is "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 2004, p. 18).

Thematic analysis was used to code the key information data collected from the initial and final interviews, reflective logs, and recordings of the sessions. After collecting data from each of these data sources, a qualitative data analysis procedure was implemented following the steps of Bogdan and Biklen (2003) and which involve: "working with data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and

what is to be learned, and deciding what you will tell others" (p.54) and as a result, several themes emerged (see Sections 4.2.2.1 and 4.2.2.2).

Moreover, three important aspects need to be considered when conducting content analysis, the theoretical base of the instrument used, the amount of information about validity and reliability, and the choice of the unit of analysis (De Wever et al., 2006). Informed by the CoI elements (Garrison et al., 1999; see Section 3.5), content analysis in this study was used to investigate the peer group dynamics including their participation, interactions, and learning taking place in the Skype synchronous sessions and the unit of analysis, therefore, is the students' comments in these sessions. These are discussed further in Section 4.2.2.3.

4.2.2.1 Analysis of initial interviews, reflective logs, and final interviews

This study collected data on preconceptions of studying online at distance, prior experience of the online environment including experiences of online PL, readiness and motives for taking a part in the online synchronous audio-visual PL sessions and perceptions of the contribution of these sessions to the overall online DL experience (Section 4.2.1.1). Tracking the changes in the students' perceptions identified in the initial interview and comparing their expectations with what they revealed in the reflective logs (Section 4.2.1.3) and with the perceptions examined in the final interviews (Section 4.2.1.4), including the benefits and challenges experienced in the sessions generated themes to be investigated in order to understand more about the contribution of the online synchronous PL sessions to the students' DL experience. The themes that emerged from the data covered the forms and types of interactions experienced by participants, flexibility versus immediacy, affordances of the video conferencing tools including Skype, and the impact of the audio-visual synchronous PL. Chapter 5 provides further details about these themes.

4.2.2.2 Analysis of peer interactions in the online synchronous sessions

Video recordings were used to document the PL experience and to observe the changes in the students' interaction dynamics and overall process of learning over time (Section 4.2.1.2). Skype was used to mediate the interaction of these students and was also helpful in recording the sessions using its recording feature. From this, it was easier to detect how students were verbally or behaviourally active within the group, providing a plausible indication of engagement within PL. The continuous interaction with these recordings and the notes taken produced themes related to the factors influencing the process of the audio-visual PL within these sessions, including the number of students attending each session, the design and content of the sessions, and the nature of interactions that occurred within these sessions including

student-content, student-student, and student-peer facilitator interaction, given that the analysis of these interactions was initially informed by Moore's (1989) three categories of interaction: learner-content, learner-teacher, and learner-learner interaction (Section 3.4). Chapters 6 and 7 include further details about these themes.

4.2.2.3 Analysis and coding using the CoI framework

As indicated in the literature on online DL, several models are suggested for analysing interaction such as Anderson's (2003b) model that describes the modes of interaction and its adapted version that is presented by Kanuka (2011) resulting in a more structured student interaction model which proposes that the interactions that are driven by structured learning activities can take the form of student-self (through reflection), student-student, and student-instructor. However, Henri's (1992) five dimensions model: social, cognitive, metacognitive, interaction, and participation is the inspiring source of a number of models of analysing interaction (Gunawardena & McIsaac, 2004). Concurrently, an interaction model describing the quality and nature of critical discourse in an online CoI has been proposed by Garrison and his colleagues (1999). The process of analysing the interactions taking place in the online synchronous PL sessions, as captured in the Skype recordings, and the changes in the peer group dynamics throughout six sessions, followed a predefined CoI coding template (Garrison & Arbaugh, 2007; see Appendix G) through which data was analysed to give a picture of each student's social, cognitive, and teaching presence and contributions to the group work. Many studies have used content analysis informed by the CoI framework as a method to gain insights into text-based educational conferencing and discourse (e.g. Garrison et al., 2006; Grogan, 2015; Kaul et al., 2018). Nevertheless, consistent with the phenomena under investigation, synchronous audio-visual PL, this framework is used to analyse recordings with voice interactions.

Further to that, deciding on the coding scheme should consider both reliability and efficiency as is echoed by Garrison and his colleagues (2006) who suggest that, for validity reasons, the first step is to select a sound theoretical model and coding scheme. In the same vein, Zhang and Wildemuth (2009) note that the use of deductive reasoning or re-use of concepts or variables from previous studies is not precluded when using qualitative design for a content analysis study. A similar view is raised by Rourke and Anderson (2004) who propose that instead of establishing new coding schemes for content/transcript analysis, researchers should employ schemes that have already been established and tested in prior studies, therefore enhancing the validity of an existing procedure. In line with these views, the recordings of the six sessions (Sessions 1, 2, 3, 4, 5, and 6) of each group were analysed using content analysis that employed

the CoI coding scheme in order to shed the light on the changes in dynamics among CoI presences within and across the sessions. This process involved detecting the indicators of the CoI categories which involved the frequency count of verbal words, expressions and actions that indicate the occurrence of the presences. The indicators of the cognitive, teaching and social presence were clustered together into categories that were emerging deductively during data analysis and were predetermined in the CoI coding template. The occurrences of the presences' categories were supported by the level of agreement among the participants' documented data in reflective logs. Additionally, notes were made at any time during these stages when a recurring pattern, behavioural situation or phenomenon began to emerge in any of the two groups (Stake, 2000).

In addition to the theoretical base, there are other two aspects that need to be considered when conducting content analysis: the choice of the unit of analysis and the amount of information about validity and reliability (De Wever et al., 2006). A unit of analysis or segment could be a specific sentence, utterance or message that is classified according to the quality of argumentation or social mode of interaction (Weinberger & Fischer, 2006); in short, it is the content that determines the unit of analysis. In the case of this research, the unit of analysis was a single comment on a single topic or discipline related concept produced by each participant during their discussions as it was easier to define without confusion. Besides, the "percent agreement" is the simplest and most often used method of measuring inter-rater reliability. Otherwise, there is the option of a negotiated approach to coding the transcript as suggested by Garrison and his colleagues (2006). The coders discuss their codes and seek consensus after producing separate individual transcripts. This method that is based on negotiation is effective especially in exploratory studies when the main goal is to develop a better understanding of the learning taking place. To establish the reliability of the data coding, a second-rater, a PhD candidate from the Department of Politics, doing a qualitative study, coded 17% of the data (i.e., two transcripts out of 12 and one from each group session recordings), and the coding was conducted using the elements of social, teaching, and cognitive presence informed by the categories and indicators of each element (Garrison & Arbaugh, 2007) and with the support of examples from the study of Shea and his colleagues (2010). The inter-rater agreement for identifying the CoI presences was 86% in that our categorisation of teaching presence and cognitive presence did not match. For example, one of the comments that was disagreed about is that of LA-SA in Session 3: "…there are so many articles that also refer to labour law from this angle I am speaking about, I can share this with you later". The disagreement was about whether this comment should be categorised as facilitating discourse or integration (see Appendix G). However, after studying the context in which this comment or unit of analysis

occurred by examining her previous comments, LA-SA presented a follow-up topic of discussion that was the "labour law "and attempted to explain her point instead of integrating information of pre-existing discussion on this topic to suggest a solution. So, the inter-rater agreement was set on the facilitating discourse category of the teaching presence. Detailed information about the outcomes of this analysis are discussed in Chapters 6 and 7.

4.2.3 Trustworthiness

Validity in qualitative studies is translated in terms of trustworthiness (Cresswell, 2003) which is the researcher's vigour to establish confidence and consistency in the findings (Lincoln & Guba, 1985) and to convince the reader that the results emerging from the research study are accurate and trustworthy (Lincoln & Guba, 1990). To improve trustworthiness for qualitative inquiry, Lincoln and Guba (1985) provide four criteria which are: credibility, transferability, dependability, and confirmability. Thus, using these strategies may reduce the researcher's intrusiveness and bias while maintaining trustworthiness in research.

Credibility is about the integrity of data and the internal validity of the study that demonstrates how credible the findings are. This aspect was established and strengthened in this study by data triangulation: semi-structured interviews, video recordings, and reflective logs, prolonged engagement with participants and data collection that lasted over four months (Appendix F), and the use of member check by involving the informants in most phases of this study, from the design of the sessions to checking interpretations and conclusions in order to ensure the true value of data (Cresswell, 2009). This was beneficial in nurturing trust and honesty with the participants and provided the researcher with a long engagement with the setting, participants and data collection. To consolidate this credibility, raw transcripts were shared with participants to check their accuracy and credibility as well as to ascertain if there was any feedback or comments they wished to add, paraphrase or delete from their contribution to the research data. Additionally, while engaging in the data analysis process, some questionable parts of my coding were re-coded by my colleague in the field of Politics to ensure that my data analysis and interpretations are neutral. Thus, findings were compared and discussed in arranged meetings that were concluded with a total agreement on all issues. Further still, to ensure transferability in this study, thick and rich descriptions of the setting, participants, the study design and methods were presented with a writing style of "honest and straightforward …authentic…so as to achieve verisimilitude, a style of writing that draws readers so closely into subjects' worlds that can be palpably felt" (Gall et al., 2007, p. 474). Therefore, the provision of these details

will enable the reader to make a confident judgement in terms of the applicability of the findings' transferability to other contexts.

To achieve dependability, the researcher used triangulation of data methods (interviews, reflective logs and video recordings), peer examination and debriefing with one PhD colleague in the Department of Politics, member checking of a brief summary of the findings and code-recode strategy. However, triangulation also involved different approaches to data analysis using Moore's (1989) interaction model alongside the CoI framework of Garrison, Anderson, and Archer (1999). Furthermore, consistency of themes was established by comparing the answers obtained from the initial interviews, reflective logs, and final interviews. This evidence triangulation, therefore, enhanced the reliability of the content analysis of the Skype PL session recordings as well as the overall conclusions drawn.

Finally, to consolidate confirmability, Creswell and Miller (2000) suggest that this could be achieved on one or more of three levels: (1) the researcher; (2) the participants; and (3) external auditors and checkers of the research study, such as reviewers. Therefore, triangulation and researcher practice reflexivity were utilised (Anfara et al., 2002; Creswell, 1998; Onwuegbuzie, 2000). Additionally, the data was tested by peer examination and debriefing, whereby a colleague conducting similar research methods reviewed the research and provided constructive feedback, which helped in a greater and deeper understanding of the data.

4.2.4 Ethical Considerations

In the process of conducting qualitative research, ethical issues arose in many phases (Creswell, 2013). Official ethical approval was required to collect data since this research used video and audio recordings to collect data for interviews and to observe participants engaging in PL activities. Thus, before starting data collection, ethics committee procedures related to the University of York were followed. So, in order to ensure that the research complied with the ethical procedures of the University of York, Education Department, the Ethical Issues Audit Form was filled out and approved. Following these procedures was to make sure that the study adhered to the ethical guidelines on research with human subjects and that the participants were not subjected to any kind of harm at any stage of the research and that their identity and privacy were protected and respected (Appendix O).

The second part of the ethical procedure was to disseminate translated versions of the informed consent forms into Arabic to participants before collecting any data from them. Since the researcher wanted to reach a wider number of participants in their formal setting and putting in

mind that students were not independent of a wider institution, an extra consent form was given to the two heads of the departments responsible for the two DL programmes involved in this study after responding favourably to the initial invitation (see Appendix R) and this allowed the researcher to proceed the research with students within the programmes they were offering by first granting her access to the online platform where she put an invitation of participation and took screenshots of the main features of the platform to inform the study. The consent forms reviewed the main purpose of the study, how participation was not compulsory, the right of withdrawal that participants had, what did it mean to participate in this research, as well as the implication of confidentiality and anonymity of data, details of how the obtained information would be used, the time that the study would take starting from interviews to Skype sessions to reflective logs alongside relevant contact details (Appendices P, Q, and R). To ensure more openness, both students and teachers were allowed to ask any question or raise any concern they had before proceeding to the initial interviews.

Regarding the setting where to find the Algerian master's DL students, it was possible to reach students on online platforms where they were mostly present to volunteer for the study. In this regard, the researcher needed to make an active choice about the research location to access the participants and therefore, the ethical approaches applied needed to be taken into serious consideration. For that reason, two main types of online spaces were focused on to recruit participants: controlled access online platform that was the formal space created by the DL institution and community-based online platforms on social media such as Viber, Messenger and closed Facebook groups. The access to these groups was controlled by an admin student who had created that social group to maintain contact with peers from the same DL programme.

As this research involves the use of Skype as an external tool that differs from other social media tools in the aspect of attempting to initialise a space where the conversation is driven by a purpose, it was important to phrase the invitations to be clear about the voluntary nature of participation in this study and students had to be informed that they will be in an access-controlled space as this may provide them with a greater sense of privacy and safety. It was also possible that students may have chosen to invite participants from among their friends in the same programme. In the process of developing possible interview questions and conducting interviews, the researcher needed to be very careful not to introduce her own biases into the process. As the researcher had access to the online platform, she had her assumptions about this subject.

4.2.5 Role of the Researcher

When conducting this study, the researcher was not a member of the teaching staff and did not take any role in the DL programme, and this confirmed to the participants that their views and participation in the study won't have any negative influence on their involvement in the programme.

The researcher took a stance as an observer and the only involvement as an interventionist was at the stage of introducing the Skype PL sessions and what this practice involved as she designed some PowerPoint slides and word documents that consist of guidelines and recommendations, excerpted from the literature, for an effective Skype PL practice. Other than that, the role of the researcher was confined to administering the initial and final interviews alongside the reflective logs after each session. As a passive observer, the researcher carried out observation as an outsider in the online sessions and did not get involved in the discussions (Lincoln & Guba, 1985) and by doing so, the researcher gained the advantage of not influencing the outcome of the study and not interfering in what could be learned. Although the presence of the observer may not be sufficiently discreet, particularly with the use of the webcam which might result in the possibility of participants changing their behaviour, carrying out repeated observations made the participants less cautious of the researcher's presence. Information about the role of the researcher was communicated to the participants at the very beginning of calling for volunteers so that students are made fully aware of her position in this case.

4.2.6 Note on Issues of Translation and Acknowledgement of Bias

There is no way to avoid the integration of background knowledge for the researcher when engaging in the act of meaning interpretation and that's why translation can be a significant source of bias in qualitative studies. However, translation in this research is a vital task to undertake especially because the presentation of the data will be in a different linguistic and cultural background. The instruments of data collection were all designed in the English language and translated to standard Arabic and the reason for doing that, as Adams (1991) puts it, is to make it possible "to answer the questions for which the study was originally designed" (p.82) and at the same time to make sure "that meaning within items is consistent with common cultural understandings" (Filisetti & Fives, 2003, p. 34).

As for translating the transcripts, the most challenging issue is that some of the data parts were in colloquial Algerian Arabic and some others in French so the plan was to convert these parts to standard Arabic and then to the English language. This process could be allocated to a

professional translator, but it was believed that the academic background knowledge of the topic was necessary to conceptualise the main issues discussed in the data plus it was a personal training to get more familiarised with the data and form a more in-depth understanding of the participants' thoughts and individual perceptions. Although the translation process took a longer time than expected, it was a worthy process to take notes and locate the most important parts of the discussion. Before translating the transcripts written in Arabic, copies of the transcripts were sent to participants via Skype and email personal accounts to ask for their feedback to maximise the credibility of the data, one participant asked the researcher to remove the name of the region where he lives in from his initial interview transcript and although this is not a variable to be considered in the study, this request was respected and proceeded; however, as far as the accuracy of the translation is concerned, multiple translation software were used in addition to seeking help from other colleagues from the researcher's same background to check the application of the correct meaning as much as possible and make sure that the idea is not distorted as this could not be done with participants themselves for not having a pre-intermediate level of English.

4.3 Summary

A "good qualitative study" according to Cresswell (2013) involves the following key components: "detailed methods, a rigorous approach to data collection, data analysis, and report writing" (p. 54). This research used the qualitative case study methodology to explore and understand the interactions taking place in online synchronous PL sessions in two DL discipline contexts in order to determine what contributions this online educational practice bring to the students' learning experience. Following the case study methodology, multiple data sources and analyses were implemented. Besides, issues regarding trustworthiness and ethics were minimised to the extent possible. Below is a summary of this chapter in diagrammatic form (Figure 4.2).

The following three chapters present the outcomes of this study. Findings from the initial and final interviews are presented in Chapter 5 and a detailed description of the interactions taking place within the six conducted Skype PL sessions for each group is presented in Chapters 6 and 7.
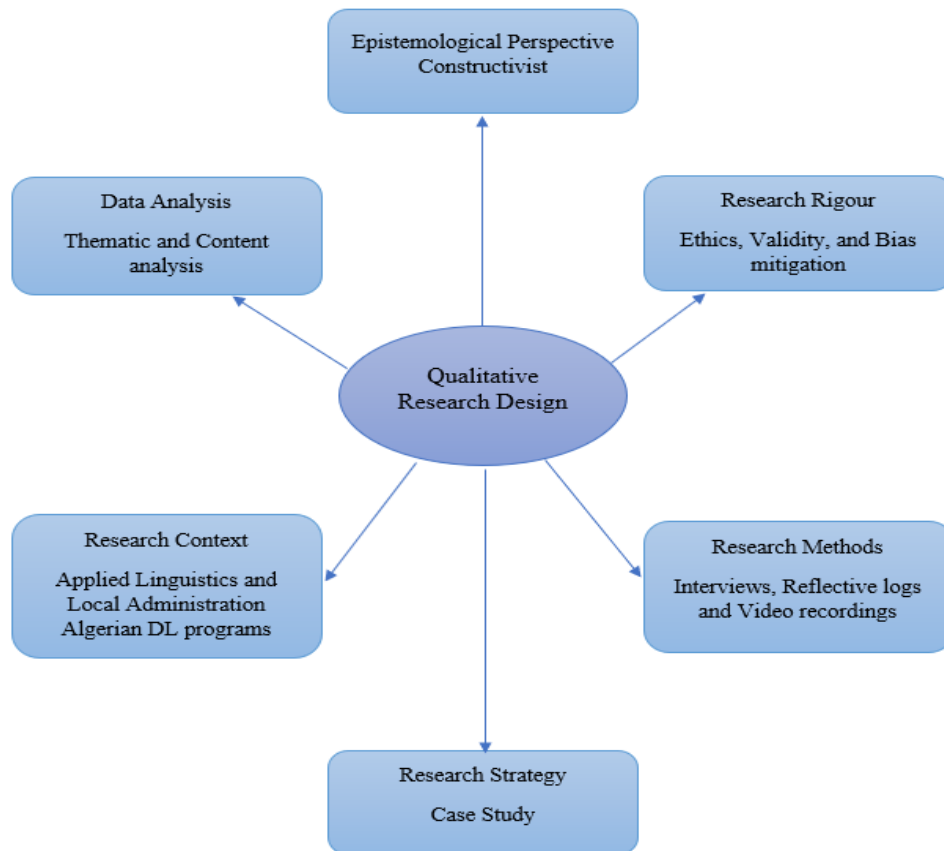
Figure 4.2 A diagrammatic presentation of the research methodology

Chapter Five: Interviews Findings

In order to investigate the interactions taking place in the online synchronous PL sessions in two Algerian master's DL discipline contexts, multiple methods of data collection were used in conformity with the case study methodology. This chapter, together with Chapters 6 and 7, provides a description and a summary of the collated data to meet the following research objectives:

1. To describe the experience of interaction in the DL programme as perceived by students and teachers;
2. To investigate the students' readiness for the Skype PL discussions and what they introspect from this experience;
3. To describe the experience of interaction in the Skype PL sessions;
4. To examine the nature of the synchronous Skype peer-led discussions for two discipline contexts (Applied Linguistics and Local Administration);
5. To investigate the perception of students about the PL experience in a synchronous environment mediated by Skype; and,
6. To formulate a conceptual model pertaining to learning in an online synchronous PL environment.

With a particular focus on the first, second, and fifth aims of the study, this chapter presents the results obtained from the initial interviews with both students and teachers (Section 5.1); and the final interviews with students who participated in the Skype peer-led discussions (Section 5.2). Findings from this study's primary data source, the six Skype PL sessions of each group, will be presented in Chapters 6 and 7.

5.1 Initial Interviews

Following the acceptance of two heads of DL departments from the total of five universities offering master's DL programmes in Algeria (see Appendices S and T), distance students enrolled in these two universities which offer two different disciplines, Applied Linguistics and Local Administration, were invited to participate in this research on online synchronous PL. Twenty-six students responded to the recruitment invitation to participate in the main study (eleven students enrolled in the Applied Linguistics discipline and fifteen students enrolled in the Local Administration discipline). These students who showed interest and willingness to participate were emailed the participant information form and were contacted subsequently to arrange for the interview and they were referred to as LA-SA…AL-SZ (see Table 5.1).

Table 5.1 Participants' characteristics

Applied Linguistics students	Gender Male/Female	Age (~years)	Local Administration students	Gender Male/Female	Age (~years)
AL-SN	Female	~33	LA-SK	Male	~42
AL-SH	Male	~35	LA-SS	Female	~37
AL-SO	Female	~30	LA-SY	Female	~34
AL-SM	Male	~28	LA-SL	Female	~37
AL-ST	Female	~34	LA-SF	Male	~27
AL-SB	Male	~51	LA-SC	Male	~31
AL-SU	Male	~43	LA-SA	Female	~38
AL-SD	Male	~60	LA-SG	Male	~55
AL-SP	Male	~37	LA-SR	Female	~43
AL-SI	Male	~46	LA-SJ	Female	~29
AL-SZ	Male	~38	LA-SE	Male	~52
			LA-SQ	Male	~44
			LA-SV	Female	~29
			LA-SW	Male	~30
			LA-SX	Male	~34

The views of teachers (LA-T1…AL-T7) involved in these two master's DL programmes were also collected to inform the main purpose of this initial interview which is to collect information on the experience of online DL, including the nature and form of interaction taking place in the two master's DL programmes, preconceptions of the audio-visual communication, prior experience with PL, preconceptions and expectations of learning with peers in an audio-visual environment using Skype, and reasons for participating in the Skype PL sessions (Section 4.2.1.1). All the interviews were carried out using the functionality of Skype to record each conversation held with each participant individually. Interview recordings were also accessible as Skype permits the recording to be accessed in the chat for 30 days. Further to this, transcripts of the interviews were generated and given to each participant to add anything that could have been overlooked.

These interviews added a deeper and more nuanced understanding of the students' experiences, perhaps otherwise missed in more formal quantitative surveys. However, in order to draw conclusions from qualitative data, it was essential to quantify the data not only for the purpose of consistency but also to discover patterns in the data.

5.1.1 Participants' demographics and preconceptions of online distance learning

The participating students (n=26) who were involved in the two master's programmes at a distance were interviewed after accepting to take a part in this research. These participating students had a diverse range of backgrounds and life experiences and their ages ranged from 27 to 60 years old. Eleven of the participants (AL-SN, AL-SH, AL-SO, AL-SM, AL-ST, AL-SB, AL-SU, AL-SD, AL-SP, AL-SI and AL-SZ) were studying Applied Linguistics and fifteen (LA-SS, LA-SK, LA-SY, LA-SL, LA-SF, LA-SC, LA-SA, LA-SG, LA-SR, LA-SJ, LA-SE, LA-SQ, LA-SV, LA-SW and LA-SX) were studying Local Administration. Twenty-three participants were working and studying simultaneously, one (AL-SM) was working part-time, and two (AL-SO and LA-SJ) were at-home mothers of young children. While the Applied Linguistics group consisted of 8 male participants and 3 female participants, the Local Administration group consisted of 8 male participants and 7 female participants (see Table 5.1); however, there was, to some extent, a balance of gender and age in volunteers compared to background population.

As for the participating teachers (n=7), all of them started teaching online since the beginning of the master's DL programme in 2016. Three teachers (AL-T4, AL-T6 and AL-T7) were teaching in the Applied Linguistics programme and four (LA-T1, LA-T2, LA-T3 and LA-T5) were teaching in the Local Administration programme.

The first four questions of the initial interview with students were designed to elicit their previous online DL experience and their perceptions of learning at a distance:

1) Before joining this master's DL programme, have you ever experienced studying online or at distance and how many years did you spend away from education before enrolling in this master's DL programme?

2) Besides your current DL course, are you taking another online course or attending regular lectures? If yes, what is it?

3) What are the factors or circumstances that led you to enrol in a DL course instead of attending regular lectures?

4) Since the masters' DL programme is new in Algeria, how did you expect studying at distance would be? and how did you find it in reality?

Due to the newness of the master's DL programme, which was launched only in 2016, it was expected that there would be a lot of challenges accompanying studying at a distance. The twenty-six students interviewed confirmed their first acquaintance with this type of learning that is different compared to their previous learning experience. However, what is new here is the association between the age factor and the selection of DE. All the twenty-six students mentioned that there was a time gap between the undergraduate degree and the master's at a distance, from 3 to 23 years, which was devoted either to professional demands or other personal circumstances. For example, LA-SK stated the following:

> *…The conventional master suits those who are at young ages, kind of. But, because of my age, work, and other commitments, I think that the master's at a distance is more suitable for me …*(LA-SK)

While students viewed DE as appropriate to their age group, teachers believed that the master's programme at a distance was an opportunity for everyone and especially for those who were unable to join regular classes:

> *…Another point is that I feel it is an opportunity for everyone because it opened a space for so many students who had difficulties joining regular classes in the university, but DL took the university to their own house. I mean you are in your house and studying so it is considered to be a chance for everyone* (LA-T1)

This time gap in addition to flexibility appeared, therefore, to be the significant contributory factors in students' selection of learning at a distance.

Regarding the prospect of studying at a distance, students' feelings ranged from excitement and curiosity to anxiety and "fear of the unknown" as was noted by AL-SN. In this respect, LA-SS, LA-SR, AL-SB, LA-SY and LA-SA, for example, mentioned the usefulness of carrying on the master's degree at a distance, clarifying that it will help them get promoted in their profession or carry on postgraduate studies without interrupting their socio-economic activities or attending regular classes that required their constant presence. Students also expressed concerns about the prospect of studying online at a distance before starting the programme, mentioning the poor quality of the internet connection as being the main limitation. Four out of twenty-six participants (LA-SL, AL-SM, AL-SD and LA-SC) expressed that they had feelings of anxiety because of their low level of technical proficiency, and this was explained by LA-T1 as being associated with the age group that students belonged to:

> *Most students in our master's DL programme are from an old generation, some are 76 years old and graduated more than 3 years ago, I mean they are not proficient in using technology and they found this programme a totally new thing for them so they enjoyed learning in this manner and also, they gained experience in this technology so it's very beneficial to learn and teach with the use of modern technology* (LA-T1)

The discussion with the remaining students indicated that they held no negative perceptions towards the use of technology and that they were already equipped with skills adequate to the current requirements of online learning. On the other hand, ten participants (AL-SN, LA-SJ, LA-SE, LA-SA, LA-SK, LA-SS, AL-ST, AL-SH, LA-SR and LA-SY) stated that they were apprehensive because of the little time they would have for studies due to family and work responsibilities. The remaining stated that they did not have any concerns and used words such as "excited" (AL-SI) and "curious" (LA-SF).

Most students' visualisations of the online DL programme were informed by the DL practices and models adopted by European universities; they clearly stated that they were expecting a more classroom-like type of learning environment that supports direct and human communication rather than just reading "frozen lectures" as commented by AL-SI. What was expected, on the other hand, ran in tandem with the reported stumbling blocks faced by students that included technical problems, time commitment due to work and family responsibilities and absence of immediate feedback. These findings confirmed the struggle of students to adapt to

DL mainly because of the limited human interaction that was clearly critical in going against what students were expecting.

Findings also revealed that teachers had a variety of feelings when it comes to teaching online. LA-T1, AL-T7 and LA-T5, for example, used the words "fun", "engaging" and "amazing experience" to express their feelings towards teaching online at a distance. In parallel contrast, LA-T3, AL-T6, AL-T4 and LA-T2 expressed negative feelings towards teaching at a distance explaining that this was because of the nature of remote teaching that it "makes you feel a kind of anxiety" as commented by LA-T3, or being the first time of teaching students remotely (AL-T6), believing that the Algerian HE is not yet prepared for such education due to the lack of planning and the large number of students (AL-T4) and teacher workload causing the inability to provide adequate academic support to students (LA-T2).

5.1.2 Perceptions of interaction in the master's distance learning programme

The results obtained indicated that teachers attached great importance to interactions and they even perceived interactivity as a key factor in effective learning. However, opinions about the experience of interaction taking place in the two DL programmes were varied throughout the interviews with both teachers and students. The following subthemes provide more detailed accounts of what it was like to interact with fellow students, with the teacher and with the content posted on the online platform.

5.1.2.1 Student-teacher interaction

Findings revealed that distance, lack of technical support, lack of communication and lack of teacher's availability and feedback were among the most challenging problems that seemed to hinder students' learning and made them feel more pressure, isolated and abandoned as expressed by LA-SY and AL-SH. Similarly, LA-T1 and LA-T2 also agreed with these points; however, AL-T6, believed that some of these are issues inherent in DE stating that "DE lacks the element of responsiveness, participation and contribution to the enrichment of lectures".

Regardless of the flexible nature of DE that appeared to be suitable to the life circumstances of students, AL-SD and LA-SR, for example, had high expectations for their online learning experience because they did not seem to get used to the absence of direct face-to-face contact with the teacher as the lack of timely feedback was a fundamental difference in the educational process. They commented the following:

The student in the classroom is communicating directly with the teacher, the questions are instant and answers are immediate but by studying remotely, you leave your question to the teacher and won't receive an answer till after two days or even a week later and this is a fundamental difference (AL-SD)

One of the problems is related to the teacher, not knowing who the teacher of the module is until the day of the written exams is a problem. In addition to that, the queries that we posted on the online platform have not been replied to ... (LA-SR)

On the other hand, consistent with what teachers mentioned as factors that affected their interaction with students which included the problem of internet connection, lack of planning due to the recency of the DL programme, teaching workload and the large number of students; other students' scenarios agreed with the fact that teachers were themselves suffering from the overload of teaching hours. LA-SS, for instance, admitted that teachers worked in both face-to-face and distance settings, rendering them unable to handle the large number of students which made it hard to provide support for them. Similar to this view, LA-SY also hinted that it was difficult to get feedback or answers to queries from teachers because of the large number of questions posted and therefore the students' academic problems were left unsolved.

Similarly, teachers also justified their limited availability by having multiple responsibilities of teaching online and in classroom settings alongside the large number of students:

When talking about DL we talk about academic support which demands qualified staff who can support the students especially when the student is at a distance, he or she might experience technical problems and lack of support. Given that there had been a lack of planning because we had 600 students ... So, I wish they considered the legal situation of the teacher who is teaching at a distance and having the same workload of teaching face-to-face, and this resulted in so many issues in the programme (LA-T2)

When we started our DL experience, we started with 600 students which required a lot of assistant teachers who accompanied the students in the chat sessions. So, these 600 students were divided into 21 groups and each group consists of 30 students so when there are enough assistant teachers, each teacher will have 2 to 3 groups and that's all and can make chat sessions multiple times in the week because they can control the discussion in a very normal way (LA-T1)

From this, it can be seen that there is consistency between the responses provided by teachers and the ones provided by students on the reasons for the lack of teacher-student interaction that was justified by the teachers' experience of workload pressure and how it significantly accounted for their inability to provide support, especially for a large number of students which made it challenging to create an atmosphere for discussion, to give all students an opportunity to ask their questions and receive an answer as was detailed by LA-T1. In line with this, LA-T2 added that the only method that they could follow as a coping strategy was to divide students into groups so that constructive interaction can take place, but the lack of teaching staff as noted by LA-T1 in his comment above was again limiting the provision of support to students.

Furthermore, teachers also found the conduct of DE greatly different from the conventional system of education and that it requires knowledge of the teachers about their roles to effectively perform them. LA-T2, for example, stated that he appreciated the value of further training highlighting the need for "the full knowledge of DE, experience, and support between teachers". Teacher circumstances were also among the reasons for the limited teacher-student interaction. LA-T2 and LA-T3 emphasised the need for a working space that is equipped with a good internet connection in order to do their job in suitable circumstances.

5.1.2.2 Student-content interaction

Following the lack of teacher support, all students mentioned they encountered difficulties related to the content on the online platform. The interviews revealed that teaching and learning were carried out through the use of the online platform that is the only communication interface with no additional print media, ICT and face-to-face sessions. Another aspect related to student-content interaction was the nature of the discussions in the chat sessions as LA-SL, for example, stated that, as Local Administration students, they were expecting more case-based discussions:

> *It is preferable to have something practical, I mean to discuss a case that is*
> *lived and experienced because it is about Local Administration ...which means*
> *we need to discuss the lived reality of what is there in the administration not*
> *just reading theories about them* (LA-SL)

Applied Linguistics students, on the other hand, needed more space to ask for clarification and explanation and to practice what has been internalised while reading the lectures as AL-SN noted. Thus, they felt that they needed the teacher to validate their understanding by asking questions during the chat sessions. In this sense, the teacher's presence and the chat sessions were particularly important for students through which they could obtain constructive feedback.

The 26 students interviewed did not touch upon the complexity of the content of the material posted on the platform as was expected and stressed more on the form of the content being only text-based. In this regard, LA-T2 argued that the form of the content posted on the platform should be varied which, in addition to interaction and completion of tasks, may also have an effect on the students' academic success:

> *What I want to stress on is that DL should also be about interactions between students and between students and teachers and it should not be only in the form of posted PDF lessons and lectures on the platform ... the various forms of posting lessons and the collection of activities that the student needs to accomplish can influence his pedagogical trajectory by trying to decrease the rate of failure by the end of the year* (LA-T2)

5.1.2.3 Student-student interaction

Students were also asked about their engagement with each other, and the availability of student-to-student interaction was found to be another challenging aspect. Students' responses indicated that the discussion forum on the online platform was the students' opportunity to build rapport, ask questions, and comment on each other. Three students commented:

> *I find that the discussion forum has positive aspects more than negative ones, I mean that ... you learn from others because everyone has its own domain...and students who already have experience which means to not be only limited to the lecture ...there are individuals who experienced the practical side of what we are studying and that they work at that specific domain...and who can relate that particular theory with something practical that they experienced in their own profession ...all these things are positive ...sometimes even when you do not understand something, you may find others simplifying it for you ...someone who can explain something to you easily ...so that you can understand it* (LA-SF)

> *Students sometimes respond to others' questions or interact in the discussion forum only because they know their responses will be a part of the marking on the online platform and not for conversation building* (AL-SN)

The discussion forum does not have that point of quick communication. For example, I put a question and after a while, some colleagues come to comment, and after a long time, I enter to see that question and also put in my comment. The meeting point is missing as if it erases those ideas that are in mind...however, these things do not occur in the chat sessions because we are present at the same time, even by writing. The discussion is quick, and the answers are given back to you at the same time, this gives more ideas and opens up the space for other questions (AL-SH)

The findings reflected positive and negative views about the student-student academic interaction performed in the discussion forum. AL-SH hinted that it was difficult to interact on the discussion forum because of the lack of immediacy, availability and presence through participation since there was no "common meeting point" that could stand for real-time communication. However, because the chat sessions with the teachers were considered to be an arranged meeting point, students found it a great opportunity to discuss their ideas, get timely feedback, and gain more knowledge to get their questions fulfilled. AL-SN also referred to the lack of purposeful conversation and that students' contributions were grade oriented. On the other hand, LA-SF stressed the positive aspect of the discussion forum related to how it was a good chance to learn from the experiences of each other. Having those students who had practically experienced what was being studied in their jobs as a source of assistance and who could simplify specific information for others was a great help.

Students also demonstrated a strong sense of isolation and frustration and how these feelings were prompted by having low levels of interaction with their teachers and fellow students. However, student-student interaction was not only confined to the online platform and the tools used for interaction went beyond the institutional provided spaces such as the students' discussion forum. LA-SJ, for example, discussed how students found another coping strategy to reduce the academic and social pressure, that was about initiating groups on social media such as Facebook which acted as an extension to their academic and social interaction and which was used to share knowledge, inform each other about updates and to support each other to sort out technical problems as was mentioned by AL-SN, LA-SV, LA-SA and LA-SF.

5.1.3 Experience and preconception of online synchronous communication

In order to explore the extent to which students are comfortable with online synchronous live sessions as well as to inform about their readiness to involve in the online synchronous PL sessions, students were asked about their communication preferences and whether they

experienced a synchronous communication with their teachers and/ or with each other where all of them have been involved in the online discussion at the same time, which software they used in order to do so, and also what they think about the use of audio-visual interaction in their DE programme.

Answers indicated that students had experienced only text-based online synchronous communication in the chat sessions programmed with their teachers on the online platform. However, their answers indicated that they were not satisfied with having this mode of communication as the only option:

> *I think that the communication via writing is so dead and frozen and free of*
> *sentiments that it does not communicate the idea but when you see and hear*
> *the teacher lecturing and there is the interaction between him and students,*
> *there is liveliness* (AL-SN)

In addition to explaining how studying at a distance with no direct audio-visual interaction was an isolating experience, students raised other issues like anonymity in communication and how identifying the other person from the communicative process can help in establishing connection and sense of presence (AL-ST and LA-SS) and closure (LA-SA). It was interesting however that some students expressed not being comfortable commenting on the posts of those who they did not know because they felt that their thoughts or critiques would be misunderstood (LA-SA and LA-SY).

Teachers also described throughout the interviews their experience interacting synchronously with students during the programmed chat sessions and how it was hard for them to communicate behind the computer screen using only the keyboard and at the same time to read the questions and comments shown on the screen (LA-T1 and AL-T7).

In an attempt to investigate why students did not experience any audio-visual synchronous communication in their DL programme, teachers' comments indicated that the audio and video conferencing features were present but not used because of the number of students as mentioned by LA-T5 as well as the teacher workload and technical capacity of the platform as stated by LA-T1.

Although direct communication is important for sharing and interacting with others to break the social, emotional and physical distance of students, engaging in audio-visual synchronous interactions was perceived by some students (LA-SL, LA-SF, AL-SU, AL-SB and AL-SO) to be marginal rather than integral because they believed that such activity would restrict the time

that they required to accomplish pending tasks. Hence, studying with a busy schedule alongside the technical problems they were continuously experiencing on the online platform were the main reasons preventing them from attaching too much importance to the audio-video type of interactions. These five students all agreed that communicating behind the screen is more comfortable to them explaining that the direct audio-visual contact was not important and using real names was enough.

However, LA-T5, for example, viewed that the lack of visual communication made learning at a distance less effective than regular face-to-face learning:

> *There had been no visual communication, and this is the principal shortcoming that we encountered in this experience and face-to-face teaching surpasses this mode of learning only when it comes to this characteristic and that is the direct communication between the teacher and the student and his synchronous presence …If the online platform simply uses text-based chat and interaction without any visual contact hence, face-to-face learning would be more effective and beneficial for both the teacher and the student* (LA-T5)

On the other hand, findings revealed that both text-based and audio-visual types of synchronous communication were experienced privately outside the online platform using social media platforms such as Messenger and Viber either to reach their teachers or to build their own communities that included students living the same experience and sharing the same inquiry. Also, AL-SI and AL-SM mentioned phone calls as another way to reach their teachers for academic queries like supervision.

Given that students' responses to the absence of the audio-visual form of interaction in their DL programme showed a varied level of interest in its use, when they were asked about which mode of communication they preferred if they were offered the choice between written communication, recorded videos or audio-visual communication, students responded that they would select a mix of all the modes explaining that they are all perceived to be complementary to each other, live audio-visual communication, for example, was considered to be easier to ask questions (LA-SA), increase the students' interest and motivation (AL-SB) and help them stay focused during the live meeting (AL-SN) whereas, recorded videos were seen to offer more flexibility to review the course contents (LA-SF, LA-SL and AL-SB). Interestingly, these findings showed that these participants are able to learn in different ways, having different learning preferences and also preferring different learning modalities.

The findings discussed above draw more attention to how it is important to think about the communication preferences of the students enrolled in DE when designing the study materials and deciding upon the mode of communicating the course content to students. One possible way is to conduct needs analysis surveys at the beginning of the programme, as was proposed by LA-T2, in order "to know better about the students and their learning preferences".

Additionally, based on the students' comments, it is very important to develop an understanding of what is more compatible with the country's socio-cultural infrastructure while deciding upon modes such as audio-visual communication that may seem irrelevant to some students. AL-SM, for example, expressed his doubt that the use of video conferencing may not be easily accepted by students, mentioning that there are cultural values that have social, traditional, ideological and religious dimensions that hinder its use. Other two female participants (AL-ST and LA-SR) shared the same point of view explaining that females in conservative families have less tendency to use the video feature of communication especially in an informal conversation because it goes against their deep-rooted conservative beliefs and cultural values as there might be security matters and data misuse, but then they confirmed that it would be no concern in case of having the teacher present in the discussion.

Teachers, on the other hand, demonstrated acceptance of the audio-visual interaction with students, mentioning that it will ease the process of learning and teaching (AL-T7) and it will reduce the time and efforts spent reading only written comments on the screen (LA-T5). However, they also expressed concerns stating that it may turn into chaotic discussions because of the unpredictable technical problems (AL-T7), weakness of the internet (AL-T6), or because the Algerian society has not yet been prepared for such an education (AL-T4).

On the other hand, the story told by LA-SE about his colleague who had poor eyesight as a result of being glued to her computer all the time holds a different position in which the selection of the mode of communication in the DL programme does not only need to accommodate the students' communication preferences, but also needs to consider the medical conditions of some students who have poor eyesight for example.

5.1.4 Experience of using Skype

Given their use of other social media platforms to interact with each other, students were also asked about their experience of using Skype or any potential need for training in the use of this software. Only four participants (LA-SS, AL-SN, LA-SL and LA-SJ) acknowledged that they had no experience of using Skype but confirmed knowledge about it and this suggested that

some training in the use of this software may be necessary. Whereas the remaining participants confirmed the use of Skype for personal reasons but never for academic purposes. However, AL-SM noted that he was using Skype to exchange study materials and documents with his classmates, but it was only one-to-one communication.

Additionally, students expressed their excitement to experience the use of Skype in an academic context stating that its use can emulate a classroom atmosphere. In this regard, AL-ST stated the following:

> *I think Skype will be so useful for distance learners because it will embody a virtual classroom like the real one which means that it will enable us to live all the learning conditions that exist in the real classes* (AL-ST)

Although AL-ST further explained that immediacy and visual communication alongside the sense of closeness are what make a virtual classroom similar to a face-to-face classroom, she and the rest of participants seemed to have concerns about the use of Skype in terms of technical deficiencies and the quality of the internet connection alongside the lack of a teacher's supervision. For example, LA-SL mentioned the problem of internet connectivity which might make the quality of the audio-visual communication very weak whereas, LA-SR mentioned that the absence of the teacher was the reason for not accepting to use the webcam function of Skype. She commented the following:

> *I really welcomed the idea of communicating via Skype because as I told you direct communication will make students more focused than only writing messages but to be honest, I had my doubts, especially because these Skype discussions won't involve a teacher that's why I asked about using only the audio form in our coming discussions and thank you for accepting my request* (LA-SR)

LA-SA and LA-SS, on the other hand, mentioned other concerns regarding cyber security and problems of hacking and expressed their preference to stick to only the audio form of communication and not using the video feature of Skype. Similarly, AL-SN also referred to this issue as being an obstacle to the students' acceptance of using such tools for the audio-visual communication in which the videos may contain their images and data; however, she expressed her feeling of being comfortable in using Skype to participate in this study knowing that the study was authorised by the head of the department of the DL programme and that videos from research participants will be safely stored by the researcher.

5.1.5 Experience and preconceptions of online peer learning

The interview questions about whether students experienced any form of learning with peers during the course of studying at distance and the challenges associated with this activity were designed to obtain evidence of any existing avenues for students to experience the process of community building. Based on the interview data, students admitted that the student discussion forums did not offer a space for collaboration due to the low participation and lack of immediacy (LA-SA, AL-SN, AL-ST and AL-SH) and they added that the only experience of collaborative peer groups took place outside the online platform and specifically in social media platforms where they built their own communities using either Viber or Messenger closed groups. However, students' responses indicated that maintaining a collaborative atmosphere in these spaces was challenging. The following extracts demonstrate the students' experience of peer collaboration and how they felt working in groups virtually:

> *…The lack of coordination between the members of the group and sometimes no tolerance of others' views created some problems* (AL-ST)

> *...We have agreed several times to arrange for a specific time and enter the group and we agreed to meet on the evening of the day that proceeds the exams, Sunday 8 o'clock in the evening but nobody made it, everyone says I have commitments, so we turned to study individually…*(LA-SA)

Based on the narratives above, internal conflicts in the group and deciding upon a common meeting time to study together were the main issues encountered by students in virtual group works nevertheless, given that these issues occurred while communicating in the written form, students were also asked about whether these issues may occur in the group work while communicating in the audio-visual form and what are their recommendations of how to avoid such adversities. Some students responded as follows:

> *Maybe because the number of students in the group was big, this may render the discussion very difficult and make the communication and interaction between the members of the group more complicated* (LA-SL)

> *I used to ask questions in the group, but no one was responding maybe because they had no answer or did not understand my question, but I think if we transfer this into direct communication, I am sure they will respond or at least clarify to me because we will be no longer behind the curtains and everyone will contribute in an open discussion…* (AL-SN)

Students mentioned having some difficulties with their group that would have been avoided if the group work involved fewer members and more direct contact. All these comments inform how virtual groups work.

Furthermore, in an attempt to learn more about the students' thoughts and expectations of the Skype PL, the comments of students indicated that engaging in an audio-visual PL is not a common practice in DE, so their expectations were based on lessons learned from their experience of interacting with their peers either in the discussion forum or in informal settings. They explained that creating meaningful PL should be based on two important elements: coordination and organisation. The coordination aspect was referred to as having a peer responsible for managing the discussion and maintaining a respectful and engaging environment (AL-SZ, AL-SB and AL-SD) whereas, the organisation aspect was about agreeing on the meeting time, the selection of the topic and the preparation before the discussion takes place (LA-SA, LA-SS, AL-SN, LA-SL, LA-SK and LA-SF). Students also suggested norms to guide their interference with each other and which in turn was thought to have an effect on their level of engagement (LA-SK), these included initialising ground rules to control the behaviour of the members of the group (AL-ST and AL-SH) and maintaining a safe academic environment (LA-SR).

For the students (LA-SS, LA-SF and LA-SL) who preferred to work independently on academic tasks, knowing that there would be a peer group meeting to look forward to on a regular basis offered them some structure and something to be curious and enthusiastic about, and this was evident from their expectations and suggestions as they put too much hope on the success of these sessions. However, some of the concerns that students expressed about the practice of Skype PL included internet connectivity and speed (AL-SH, AL-SM, LA-SS, LA-SL and AL-ST), troubleshooting issues with Skype (AL-SD and LA-SG), misunderstanding between the group members (AL-SM, AL-SN and AL-SU), wasting time (LA-SF) and failing to achieve the goal that was revising for the exams (AL-SM, LA-SK and LA-SS).

On the other hand, only three teachers (LA-T1, AL-T4 and AL-T7) expressed their concerns about the practice of Skype PL sessions stating that the presence of a teacher is important to maintain organisation (LA-T1 and AL-T7) and that "the results of such groups vary according to the morality of their members, so that communication may be ruined by the presence of a single disorderly element" (AL-T4). However, the remaining four teachers showed an encouraging willingness to support the Skype PL indicating that collaborative learning with an explicit intention to share knowledge and add value allows reducing feelings of isolation and

even considered it as "a suitable coping strategy for students to turn to their peers when they do not find teachers available for support" (LA-T3). In fact, LA-T3 mentioned using PL in an "indirect way during the chat sessions" by nominating a knowledgeable student with the intention to explain ideas in a simplified way.

5.1.6 Reasons for participating in the Skype peer learning sessions

Students were asked about their reasons for participating in the Skype PL sessions in order to elicit their expectations of what their participation might offer them. This question was also asked in the final interviews with the intention of comparing the students' responses. The wide variation in the students' answers was interesting. Some students commented that the potential advantages of interacting with others in a "classroom-like" community (LA-SK) may include support in understanding the content knowledge (AL-SI), learning from others' practical experiences (LA-SS, LA-SL and LA-SY), practising what has been individually internalised (AL-ST), getting immediate feedback (LA-SA, AL-SN and LA-SG), and motivation to complete the DL programme (AL-SH, AL-SM, LA-SL, LA-SA, LA-SE and LA-SF). This latter aligns with LA-T3's comment about the number of students who withdrew from the Local Administration programme (n=152) explaining that this was due to failing to submit required assignments and/ or not sitting for the written exams that required physical attendance; however, no other reasons related to perceived difficulty of the content were mentioned. This is particularly important as students were often fearful of the mode of studying at distance more than the content being studied and this can then be multiplied by the isolation that can be felt in the case of learning at distance.

On the other hand, five participants (AL-SN, AL-SD, LA-SF, AL-SH and LA-SE) considered the online PL sessions as a normal activity similar to that they used to have on Messenger and Viber to revise for the exams and that having a peer facilitator this time with the audio-visual communication would make it more engaging and organised (AL-ST and AL-SN). However, LA-SF commented that his participation would be just to satisfy his curiosity about whether these sessions will work or not confirming again that he did not see the point of the audio-visual communication. Similar to LA-SK, he also viewed that the reason for participation is linked to the purpose of the sessions that was about revising for the exams stating that "I am anticipating that these sessions should have a clear purpose that is revision for the exams and honestly if otherwise, I won't participate because it will be a waste of time for me".

5.2 Final Interviews

Guided by the research aims and elements of the CoI framework detailed in Section 3.5, the list of questions designed for the final interviews aimed to gather further evidence to corroborate the information collected through the examination of the six sessions recordings and their reflective logs as well as the initial interviews. Again, the conduct of the final interviews was with the help of Skype functionality to have a conversation with each participant individually and record the interview (Section 4.2.1.4). Twelve participants accepted to take part in the final interviews, five participants from the group of Applied Linguistics (AL-SN, AL-ST, AL-SM, AL-SH and AL-SI) and seven participants from the group of Local Administration (LA-SK, LA-SS, LA-SA, LA-SL, LA-SY, LA-SG and LA-SR). Participants were also able to access the recording of the interviews as Skype allows the recording to be available in the chat for 30 days. Similar to the initial interviews, all participants received a full transcript of their individual interviews and had the opportunity to verify and review their responses or to add anything that might have been missed.

5.2.1 Reasons for participation

Students were asked about what motivated them to take part in the online synchronous PL sessions. Although more comprehensive, the responses collected from these interviews were still consistent with those collected from the initial interviews and most answers about the reasons for participating in the Skype PL sessions were about being motivated to revise for the exams (LA-SS, LA-SA and LA-SK), curiosity to try a new form of interaction (AL-ST), getting to know their fellow students in the same programme (LA-SL and LA-SY), knowing that most of the group members are students with work experience in the same field of study (LA-SG) and being in a space where they could share "real academic conversations" (AL-SH). In the students' opinion, the Skype PL sessions were helpful for their learning and revision for the exams. LA-SS compressed this in the following comment: "they were eye-opening discussions that added too much to my knowledge account and to be honest, knowing that I am in a group of practitioners from the field of administrative sciences made me eager to attend the sessions". Some students (AL-ST, AL-SM and LA-SR) also commented that their participation in the discussions was to reassure what they have internalised while revising individually.

Students who did not show constant attendance were also asked about the reasons for not participating in all the sessions and their answers were mainly about not having enough time because of work and family commitments (AL-SB, AL-SU, LA-SC and LA-SJ) alongside problems of internet connection (AL-SD). However, AL-SO who participated only in the first and third sessions stated that the timing of the sessions did not suit her, and she commented that

"even though it is a great idea and a new strategy, the choice of timing is really bad as the sessions are conducted in the evenings and this really does not suit me well".

On the other hand, there had been some students who decided to take a part only after a while from the start of the sessions; AL-SZ, for example, started participating only in sessions 5 and 6 stating that he needed motivation because he could not revise on his own whereas, LA-SE, whose participation started from Session 4, mentioned that he was encouraged by the positive comments on the messenger group by those who participated and how helpful they found the conversations. However, it should be noted that these students (AL-SO, AL-SB, AL-SU, LA-SC, LA-SJ, LA-SE, LA-SF, AL-SZ and AL-SD) justified their inability to be re-interviewed with lack of time and personal commitments.

5.2.2 Perceived interaction in the online sessions

Students were asked to reflect on how their interaction and participation as well as the participation of their peers contributed to their experience and to the process of the online PL, participants mentioned that it was an opportunity to meet each other and benefit from each other in a way that contributed to their knowledge (LA-SG and AL-SH). Participants also found the Skype synchronous sessions "an opportunity to not only give my opinion but also discuss it" (AL-SH) and also being able to "ask whatever comes to my mind without thinking twice" (LA-SL), and "receive an answer immediately" (AL-ST). In this regard, students found the ability to "pose questions and receive immediate answers that lead to other deeper questions" (AL-SN) more supportive of their learning (AL-SM, LA-SY and LA-SG). Having a space such as the Skype synchronous sessions where students could meet and share their questions, express their concerns, and receive immediate clarifications was perceived as advantageous and contributing to the learning process. On the other hand, the automatic sharing of the recorded Skype meeting to all the group members was also considered to be an add on to the students' learning. Interestingly, some students (AL-ST, LA-SS, LA-SG, LA-SL and AL-SH) admitted that they had a look at these recordings to check some aspects of the content covered that they found useful whereas LA-SR added that she had to skim through the recording only to fill the reflective logs, the remaining students stated that there had been no need to do so.

In addition to the responsiveness aspect of immediacy, students also commented on the directness of the verbal interaction that was mediated via Skype which allowed them to hear and speak to each other instead of just reading lessons and writing comments on the discussion forum (LA-SL). Similarly, AL-SN also agreed that the sessions changed her learning routine and how they added the element of personal interaction:

Learning via the online platform sometimes makes you boring and routine and create passivity because you interact with a screen however, learning with my peers made me pose questions and receive immediate answers that lead to other deeper questions and new horizons of thinking despite the online platform involve the discussion forum but still miss the element of personal interaction and deep discussion that I found the sessions perfectly offering it and I could feel something concrete and not inanimate (AL-SN)

Furthermore, LA-SS compared these sessions to "like meeting in the library to revise together for exams" (LA-SS). The directness of the interaction created a sense of closeness and familiarity through the use of names as reported by AL-ST and LA-SA and made it "easy to communicate with no keyboard hustle" (AL-SH) and "take a rest from reading contributions on the screen" (LA-SK).

When students were asked about the importance of having a peer facilitator to enhance the interaction, there was a general feeling that his/her presence was useful in "keeping the community of learning together" (AL-SH), keeping the discussion going (LA-SR, LA-SL, LA-SY, LA-SG and AL-ST) and focused on the discussed topic (AL-SM and AL-SH), to which LA-SS and LA-SA added that his role was important in keeping the discussion organised. One of the advantages that the peer facilitator brought to the sessions was professional expertise (LA-SS), which meant that the peer facilitator was illustrating topics using scenarios and real-life cases from his work experience (LA-SA, LA-SL and LA-SG) and shared references (AL-ST and AL-SM). LA-SS commented that the sessions were "like meeting in the library to revise together for exams" and added that the peer facilitator was like "that one student who is good in mathematics and leads the discussion to explain to us and answer our questions". However, two participants mentioned two issues regarding AL-SN's and LA-SK's facilitation that affected interaction. First, not being able to manage time effectively in that "resuming the discussion for the late comers was time consuming" (AL-SH) and secondly, not being able to stop the side talk (LA-SL).

While everyone agreed that the presence of the peer facilitator in the online session is important, some (AL-ST, AL-SM, LA-SA, LA-SS and LA-SY) believed that supervision by a teacher was still needed "to make sure that we are not transmitting wrong information" (LA-SL). LA-SR suggested that it would be better to have the teacher review the recording and evaluate our contributions "so that we have a clear idea that we are on the right track" (LA-SR), whereas, AL-ST, AL-SH, LA-SS, and LA-SA mentioned emailing their teachers to check some conclusions and information that they were uncertain about.

5.2.3 Perceived sense of community

When asked about how the Skype sessions contributed to their sense of community, students identified things that could be summarised as a sense of closeness, common interest and joint goals. One aspect that students agreed on was the feeling of closeness that was emerging through the discussions, LA-SL, for example, stated that "we were not only discussing academic topics, but we were also building a relationship that cannot exist in the written discussions" and LA-SS added that these sessions "extended my friendship circle and I am still in contact with them even after the sessions". Students reported that they became more familiar with each other (LA-SY, LA-SS, LA-SK and AL-SM) and used real names to address each other (AL-ST, LA-SA, AL-SN and LA-SS).

According to AL-ST, being in a group where the goal of all the members was to revise for exams and improve their knowledge was what made her feel a sense of community. Whereas LA-SL pointed out how the mutual respect between the members of the group maintained a sense of community and played a role in motivating her to attend more sessions. Some participants (LA-SY, LA-SK, AL-SI, AL-SM and AL-SH) also commented that they felt themselves taking responsibility for their own learning and also shared responsibility in working together (AL-SN). Both LA-SK and AL-SN stated that they were spending some time writing down an overview of each topic in advance and checking resources to add more to the discussion whereas, AL-SH stated that he was verifying the names of authors and their definition of terminologies before sharing them with the whole group adding that " I wanted to check my information and not to mislead the group at the same time and because of this I still can remember most of the definitions we have discussed" (AL-SH). Other participants (LA-SS, LA-SL and LA-SG) acknowledged that having a space where students could meet reduced their feeling of isolation "to not feel bored when sitting alone and revising my notes" (LA-SS). However, AL-SI also commented that in some sessions, he felt insufficient interaction describing it as "moments of silence" which made him think about leaving the session, he added the following:

> *I do not really remember which session, but I remember that we were only five and two were experiencing bad internet connection and I honestly was thinking to leave because I did not want to waste more time* (AL-SI)

For LA-SS, the sense of community does not occur in any group as "feeling that you belong to a group does seldom happen and peer learning may not work with any group of peers", she believed that the mutual interest and concerns alongside respect and openness shown in the

sessions made her more confident to "criticise ideas and correct misunderstandings when I am sure of the validity of my answers and information".

5.2.4 Perceived learning with peers

In their reflection on how the Skype PL sessions helped in their learning of the content discussed, students' comments could be abridged into two categories: facilitation and application of knowledge.

Facilitation in the sessions produced opportunities for asking questions they did not think of before (AL-SH, AL-SN and LA-SA), providing clarifications (AL-SI, LA-SY, LA-SG and AL-SM) and simplified explanations of the concepts (AL-ST, LA-SA, and LA-SY), providing direction and a sense of moving on (AL-SI), analogies (LA-SS and LA-SK), and explaining processes (LA-SA, LA-SL and LA-SR). These clarifications, analogies and explanations came from the peer facilitator and students by working together to understand the topic of the discussion and "imparting the knowledge and making learning easier than it is when studying alone" (LA-SA), "when we revise together, more details become visible to us" (LA-SR). It was also stated that, in discussions in the sessions, students found being corrected by others as a way of reassuring understanding (AL-SN) and memorising definitions of important concepts (AL-SI), to which LA-SY, LA-SK, LA-SS and LA-SL added that the different ways of thinking and different work experiences helped them gain insight from the various perspectives.

For LA-SS, the facilitation of learning was a result of having practitioners in the field of Local Administration among the group who added practical insights into their theoretical understanding, she gave an example of LA-SK who was good in public transactions and LA-SR who was also in the field of the disciplinary system, "all of them had a practical experience in the domains we were discussing. I personally took away a lot of things that I was not knowledgeable of" (LA-SS). LA-SS also added that "having decided about topics in advance was a plus because it gave us time to look at the material again and write down the questions that I need my peers to help me in understanding them".

Participants were also asked if they had the chance to use the gist of their Skype conversations as the final interviews took place after the end of term exams. Six participants (LA-SA, LA-SS, LA-SK, AL-SN, AL-ST and AL-SI) commented on the application of the knowledge and information gained from the discussions. LA-SA, for example, mentioned that some questions in the exams tackled cases that they already explored together, LA-SS added that she used the examples that were given by LA-SK and LA-SR based on their work experience in order to back up her answers, while AL-ST and AL-SN saw that the Skype PL sessions helped them

remember definitions, key concepts, and founding figures, "whenever I saw a question that requires the definition of the concepts we discussed together, I remember the voice of AL-ST or AL-SH explaining them" (AL-SN), "I was always confusing between De Saussure and Chomsky but I remembered what AL-SI told me on how to make a difference" (AL-ST). Whereas LA-SL, LA-SG and LA-SY viewed the discussions as yielding more personal meaning rather than academic application as they commented on the helpfulness of the knowledge gained from the discussions in their professional contexts and how they had "an impact on how I process administrative matters more effectively in my work" (LA-SG).

In short, the students' "weekends' routine" (LA-SY) of committing to participating meant that the Skype PL sessions were used to get timely answers and availing from other's experiences (LA-SR), "to change the routine of communicating behind the screen with students you did not get the opportunity to meet them in person" (LA-SH), and to enhance the learning of the content that had been studied independently (AL-SN).

5.2.5 Perceived use of Skype

As noted in Section 5.1.4, only four individuals (LA-SS, AL-SN, LA-SL, and LA-SJ) confirmed not using Skype prior to the online PL experience. On the other hand, the remaining participants stated that using Skype was confined to personal communications except for AL-SM who used this software in his undergraduate years for exchanging study materials and documents with his classmates. Findings revealed that the majority of participants felt at ease in the Skype synchronous environment and that "it created an interactive space" (LA-SS). However, other than the weak internet connectivity and speed, students did not report any technical issues related to the use of Skype as a software. According to LA-SL, AL-SN and LA-SS, it did not take too long to get used to the functionality of Skype; AL-SN, for example, stated that "it was a natural thing to get intimidated because it was the first time I used Skype". LA-SK and LA-SY, on the other hand, noted that although they used Skype previously for personal reasons, they found using it with peers "strange only in the first session" (LA-SK) and "something new for me to speak about academic matters via Skype" (LA-SY). In addition to this, AL-SN, AL-ST, LA-SS, AL-SM, AL-SI and LA-SK indicated that if some aspects of Skype functionality were used such as: sharing the screen and the webcam, the sessions would be better; AL-SN, for example, explained that because some did not use the webcam, it was hard to identify who was talking and she ended up mixing between two students whereas, AL-ST stated that sometimes she was speaking at the same time while another student was speaking and this was mainly because "it was hard to see any signs when their screen is black" (AL-ST).

Nevertheless, LA-SG and LA-SY found using the webcam unnecessary, mentioning that "hearing others talking about ideas is enough for me, I do not think seeing their faces can make any difference" (LA-SY). However, for LA-SS and AL-SI, it was beyond the preference of liking or not liking the use of the webcam rather, LA-SS found using it while the other females in the same group did not, "uncomfortable and embarrassing"; she mentioned the following:

> *There is nothing wrong with Skype, it is like any other technology, but the issue is in the user; I personally used the webcam in the first session if you noticed but when I saw none of the females using it after a while, I felt uncomfortable and embarrassed and I turned it off* (LA-SS)

Whereas AL-SI stated that he did not use the webcam for technical issues, such as the internet connectivity and the lag time associated with hearing the sound. Another aspect of interaction within Skype was muting the microphone and concerns about the background sounds given that students were communicating from home (AL-SH) and were often forgetting to use the muting functionality of Skype (AL-SM) which made some sessions "noisy and difficult to listen to each other's talk" (LA-SA). Participants were also asked if they have ever thought about using the chat and they commented that "it was not necessary, we started with the microphone and we continued that way" (LA-SN), "it was easy to just speak and not write but I used it only once after the session to send some articles to my peers" (LA-SA).

Other than the above-mentioned issues, participants acknowledged that Skype was easy to use and suitable for their learning style. In this regard, AL-SN and AL-ST commented the following:

> *I always found the materials on the platform inanimate, so I liked the idea of studying with peers via Skype because there is interaction, and I am a person who learns better by listening and speaking so it suited my style* (AL-SN)

> *I am happy with using Skype and honestly, I did not have to revise the definition of some terminologies again because I could memorise all that we were discussing especially the names of the pioneers of each field, elements and basics and things I used to confuse between* (AL-ST)

A number of students commented that they found the PL sessions mediated via Skype similar to "face-to-face discussions" (AL-SN) and that "it was like we were sitting in the same room" (LA-SA) however, LA-SS argued that because these sessions were informal, some students did

not take them seriously as their choice of the place where to connect from was not "appropriate for academic discussions" and she added that:

> *...if it was a Skype discussion with a teacher, they would definitely use an office and be presentable, but I did not sense any seriousness from the way some of them were sitting or the place they were connecting from* (LA-SS)

Contrary to this point of view, LA-SK and LA-SG found that feeling comfortable is what they saw helpful about Skype discussions, for example LA-SG commented the following:

> *Skype was helpful because I could just use it from my phone, put on the earphones and do whatever I want to do while listening to the group contributions and if there is a question or something I know, I intervene...*(LA-SG)

5.2.6 Interaction beyond the Skype peer learning sessions

When asked about any arranged meetings after the conducted six Skype sessions or any other related use of the networking experience they had from the Skype sessions, students mentioned having instances of communication between each other, on the chat of the Skype group and through private messages on messenger. A number of participants (LA-SS, LA-SR, LA-SA, LA-SY and LA-SR) commented that they exchanged questions and answers two days before the exams using text chat on the Skype group. LA-SL, LA-SS and LA-SK also stated that they had the chance to meet some of the participants face-to-face when they went to sit for written exams. Four participants (LA-SS, LA-SA, LA-SY and LA-SR) stated that they would like to meet again and discuss the programme content-related topics however, LA-SK said that he got a new-born baby and barely can find time to study whereas, LA-SG saw that these sessions are helpful only when the exams are close and felt that "there is no need for more meetings at the moment".

On the other hand, AL-SN, AL-ST, AL-SH and AL-SI chose to contact each other on messenger and stated that their conversations were more social and not about the content of the programme. AL-ST suggested that it would be useful to have a teacher responsible for arranging the sessions and selecting the topics of discussions because "it will help them track our progress and make the chat sessions that they organise after each 4 weeks more focussed on the unsolved problems encountered in our discussions" (AL-ST).

5.2.7 The future of the Skype peer learning sessions in the Algerian master's distance learning programmes

Participants were asked whether they might prefer a similar PL practice to be integrated into their DL programme or remain as a side informal activity between students. Several students commented that they would like to have it as a part of their programme using the existing platform by activating the audio-visual communication and with the supervision of a teacher in order to confirm their content knowledge and understanding (AL-ST), organise and design the sessions (LA-SL), evaluate their progress (AL-ST and LA-SK) and "give feedback on individual performance" (LA-SG). On the other hand, LA-SA, LA-SS, LA-SR and AL-SN argued that this practice should remain as an additional and informal activity mentioning how the informality of these sessions increased their confidence (AL-SN) and that the diversity of the professional background of the members helped them "to see things from a different angle" (AL-SM), think critically (LA-SY), and reduced their feeling of isolation (AL-SN) however, AL-SH argued that these sessions do not suit all students as "their learning preferences might be different and possibly they will reject contributing in these sessions". This view was similar to that of LA-SS who also emphasised that having a shared goal and willingness to engage are necessary to develop PL. She stated the following:

> *Peer learning may not work with any group of peers, so the good thing is that it was voluntary. Another thing is that we did not choose our peers, it was our shared goal that put us together through you of course so if we had the opportunity, we could choose only our close friends and not the ones who could benefit us and add to our knowledge* (LA-SS)

Additionally, LA-SS, LA-SK and AL-SI agreed that the content of the discussion is what determines the place of this practice in the DL programme. They argued that informal PL is more suitable when revising an existing content whereas, integrating PL into the DL programme is more suitable when dealing with a new content and in this case instructing and guiding the peer facilitators by a teacher is critical. In this regard, AL-SI clarified the following:

> *I think that if we gather to revise something that we already dealt with and has already been there on the platform then it is up to the students, they have been doing the same on messenger and we did it via Skype so it's fine but if there is something new to learn of course it's not going to happen without instruction from teachers to the facilitators* (AL-SI)

The selection of the peer facilitator was also among the participants' suggestions for effective Skype PL sessions. LA-SS stated that having LA-SK as a peer facilitator of the second group was "a good fit because he was knowledgeable given his work experience is related to our discipline". LA-SA and LA-SR also agreed on this point adding that "he played his role effectively and he knew when to sit back and when to intervene" (LA-SR). However, LA-SG, AL-ST and AL-SM recommended that the peer facilitator should be a student from the previous cohort as "he might have an idea about the questions that are mostly included in the exams" (LA-SG), "has a great deal of knowledge and experience than someone from our same cohort" (AL-ST), and "can provide us with materials and references that he found helpful" (AL-SM). For most students, the qualities of a good peer facilitator are to be knowledgeable and able to impose order. The peer facilitators of the six sessions (AL-SN and LA-SK) themselves stressed the importance of being knowledgeable of the topics of discussion, being open and able to maintain organisation. However, while LA-SK stated the need for a teacher to guide the peer facilitator and plan the sessions, AL-SN stated that the guide (see the accompanying material) that was provided before the sessions explaining the role of the peer facilitator was informative and she saw no need for a teacher to interfere as "it is a practice that is organised by students otherwise it will lose its essence, the important thing is to have a plan but it also goes back to the extent participants find these sessions serious".

Most teachers expressed positive attitudes towards the support that the Skype PL sessions can offer to students learning at a distance and this experience was even proposed to the DL programme leaders by one participant who was also the students' representative. In this regard, AL-T6 stated the following:

> *This peer learning experience was presented by the students' representative, who stated that the group had benefited from the peer learning sessions and had obtained a certain percentage of assimilation, and what remained ambiguous was presented to the teacher via email. I think it is a positive initiative because it creates perseverance* (AL-T6)

To avoid having the sessions "turning into a chaos" due to the absence of the teacher's guidance (AL-T4 and LA-T5), teachers gave recommendations on how to make these sessions more effective as some of them focused on planning and organisation matters such as distributing roles among the group members (LA-T2), ground rules (LA-T1), number of students in the group that "should be no more than 10 students but again it depends on the discipline" (LA-T3) and officially approved virtual spaces by the programme managers for security reasons (LA-T5). This latter goes in line with the view of another two teachers (AL-T4 and AL-T7) who saw

no need for the use of Skype for this type of activity since there was an official platform that included students' forums but further added that it is up to students and their preferences. On the other hand, LA-T5 stressed the need for clarifying the approach to the implementation of this strategy:

> *There should be pre-set goals, are we trying to develop an educational method*
> *that simulates or takes the advantages of face-to-face class and leaves behind*
> *its negative points such as the compulsory attendance of the student, is the*
> *presence of the student obligatory or not* (LA-T5).

The implication is that a clear structure presenting the objectives and the working of PL should be communicated to understand the approach of this strategy and its place in the DL programme.

5.3 Summary of the Initial and Final Interviews Findings

With respect to the aims of the study pertaining to describing the experience of interaction in the DL programme, investigating students' readiness and expectations of Skype PL sessions, and the perceptions of students about these sessions, this chapter explored the students' perceptions of how the Skype PL sessions contributed to their overall online DL experience. Students' expectations and perceptions reported before participating in the Skype PL sessions remained consistent with their final perceptions following the interaction experience with their peers. Most of the students' responses referred to the importance they place on directness, immediacy and interaction with both teachers and other students and how they play a role in developing a sense of community and maximising the support that is provided throughout the learning process.

In order to gain a deeper understanding of the contributions of the conducted sessions, further data were extracted from the recordings of the Skype PL sessions whose content is analysed and presented in the following two chapters. Chapter six details the synchronous meetings of the Applied Linguistics group whereas Chapter seven details the synchronous meetings of the Local Administration group and both chapters represent a description of each of the six sessions by particularly focusing on the number of attendees, the design and content of the sessions and the interactions between students in those sessions. These interactions were further examined from the CoI perspective for the purpose of having a better understanding of the process and types of interactions as well as how they are distributed over the period of six sessions. Making sense of the evidence collected from the sessions' recordings also required the examination of the students' sense of community and perceived learning documented in their reflective logs.

Chapter Six: Online Synchronous Sessions of The Applied Linguistics Group

 As the previous chapter's findings discussed the interaction experienced in two Algerian DL programmes, expectations and perceptions of Skype PL, the purpose of this chapter is to address the aims of this study related to describing the experience of interaction in the Skype PL sessions and examining the nature of the synchronous Skype peer-led discussions for the Applied Linguistics discipline context.

Given that this research was limited to focusing on how students perceived and contributed to the interaction occurring in the online sessions rather than attempting to use an evaluative approach to content knowledge, each peer-led session of the Applied Linguistics group is described in terms of design, content, and type of interaction (Student-peer facilitator, student-student and student-content interactions) following a thick description approach to analysis (Denzin & Lincoln, 2005) and also analysed using the CoI coding template as a guide for content analysis in order to further understand the interactions taking place between peers in the online sessions and indicate any changes in the interactions' dynamics over time with the support of participants' reflections after each session. Hence, an analysis of the nature of students' interactions in online sessions using the CoI framework reveals important developmental features of learning and community building. Accordingly, microphone (voice), webcam (video) and text chat (written messages) data were the main categories of participants' contributions to the sessions and any comment that was produced after starting the recording of the session was regarded as a unit of analysis which was specified as a full comment by one participant on one specific aspect, topic, or concept.

Reviewing the recordings of the online sessions and referring to the transcript of students' contributions enabled the coding of the comments as social presence, teaching presence, or cognitive presence (see Section 3.5). The total of students' comments identified across these six sessions is 592 comments and this include 93 comments in Session 1, 114 comments in Session 2, 87 comments in Session 3, 116 comments in Session 4, 88 comments in Session 5 and 94 comments in Session 6. All the students' comments were numbered in order of appearance, along with the type of presence represented by each.

The first session, Session 1, of the Applied Linguistics group was conducted on the fourth of August 2019 at 6 p.m. and was preceded by a welcoming meeting on the second of August that was attended by five participants (AL-SN, AL-ST, AL-SH, AL-SB and AL-SU) and lasted for

about 36 minutes. This welcoming meeting was an opportunity for students to become established in the discussion and introduce themselves to the group as it appeared that AL-ST and AL-SH resided in the northern coastal cities whereas, AL-SN, AL-SB and AL-SU were from the eastern south of the country. Besides, all the members were teachers of Arabic at primary school except for AL-ST who was a teacher of Arabic Literature in middle school. It is also worth mentioning that using the webcam by all five participants allowed them to actually see each other although two participants, AL-ST and AL-SN, were already familiar with each other. Two days before this welcoming meeting, the researcher posted a PowerPoint presentation and a word document on the Skype group (see accompanying material) which included information to support participants about how to set the ground rules of the conversation, the role of the peer facilitator, and instructions on how to utilise the various features of Skype. This welcoming meeting, therefore, was again a good opportunity to go over these points briefly and answer any questions students might have as well as to make them more familiar with the working of Skype and its different features, discuss how to sort out possible technical issues such as forgetting the Skype account password and agree on the topics of the next discussions. Students also had the chance to decide who might volunteer as a peer facilitator (PF) and hence, AL-SN agreed to take the role after AL-ST nominated her explaining that she was one of the high-achieving students in their cohort.

Following this welcoming meeting, other subsequent six sessions spanned over a time period of two months (August and September 2019) and were conducted only in the evenings depending on students' availability. The topics that the participants of this group selected included past examination papers to revise and practice questions as their second-year exams were approaching. Accordingly, the principal content these participants dealt with included solving open-ended problems and discussions of discipline-related terminologies and key concepts as well as social conversations mostly provoked by technical issues of working with Skype. The nature of these discussions determined the interactional dynamics taking place, which are, peer facilitator-to-student, peer facilitator-to-content, student-to-student, student-to-peer facilitator, and student-to-content interaction.

Skype allowed participants to interact using audio through the microphone, video through the webcam, text chat, voting poll, and screen sharing. The voting poll was the most used feature after the microphone and the webcam, to schedule the sessions by voting on the time that suited them best and that was mostly between 6 and 9 p.m. on either Friday or Saturday evenings and then, it was followed by the text chat where students were sharing documents and exchanging past exam topics to decide on which one to discuss before each session. To capture all the

students' interactions, the researcher used the recording feature of Skype through which the sessions were recorded and automatically posted on the chat of the group after the recording was stopped and then the researcher had to download the recording and save it in an MP4 format. Participants were made aware that these recordings are taking place and that they can have access to them up until 30 days after which they will be automatically unavailable.

It should be noted that the researcher was present in all the six sessions, and the only instance when she took part in the discussion was in the welcoming meeting in which her role was about setting a more social and welcoming environment where participants were introduced to each other; whereas, in the remaining sessions, the researcher acted as a passive observer but never interacted with participants when the recording of each session began.

The number of students who attended the online sessions ranged from 5 in Session 3 up to 7 in Session 6 but never reached the full number of participants who already agreed to participate in the research study as only 5 students out of the 11 participants (coded as AL-SN, AL-ST...) showed consistency in attending the total of six sessions. Table (6.1) summarises the participation of 10 students in the Skype sessions and who will be included in the analysis of the data as one student, AL-SP, did not attend any of the sessions stating that he was busy with his family and the timing did not help him to attend any of the scheduled sessions. The remaining five students (AL-SO, AL-SB, AL-SU, AL-SD and AL-SZ) who did not attend all the sessions were also asked about the reasons for their inconsistency and their responses were mainly about lack of time, family responsibilities, the planned time was not adequate and weak internet connection.

Table 6.1 Applied Linguistics students' details and participation in the six Skype sessions

Applied Linguistics students	Gender Male/Female	Age (~years)	Sessions attended
AL-SN (PF)	Female	~33	Sessions: 1, 2, 3, 4, 5, 6
AL-SH	Male	~35	Sessions: 1, 2, 3, 4, 5, 6
AL-SO	Female	~30	Sessions: 1, 3
AL-SM	Male	~28	Sessions: 1, 2, 3, 4, 5, 6
AL-ST	Female	~34	Sessions: 1, 2, 3, 4, 5, 6
AL-SB	Male	~51	Sessions: 1
AL-SU	Male	~43	Sessions: 1, 2
AL-SD	Male	~60	Sessions: 2, 5, 6
AL-SI	Male	~46	Sessions:1, 2, 3, 4, 5, 6
AL-SZ	Male	~38	Sessions: 5, 6

6.1 Session 1: Exam preparation techniques

The first session of the Applied Linguistics group was conducted in the first week of August (Sunday 4th August 2019) at 6 p.m. and lasted for 49 minutes. Students of this group were in their second year's first semester and also most of them were not working because of summer holidays so, the timing of introducing the Skype PL was thought to be appropriate because up

until this point, students should have become more used to the system of DL and have covered different topics related to their programme. Eight participants attended the first session (AL-SN, AL-SH, AL-SO, AL-SM, AL-ST, AL-SB, AL-SU, and AL-SI) from which three of them (AL-SO, AL-SM and AL-SI) were experiencing the Skype environment for the first time as they did not attend the welcoming session; all the three of them were primary school teachers and located in the same coastal city. The remaining participants (AL-SD and AL-SZ) did not join until after the first session stating that the timing of the session coincided with other family responsibilities. AL-SZ, for instance, indicated that although the session was scheduled for the evening time of the weekend, he still was engaged in self-employed free business stating that his work commitment could not be rescheduled.

6.1.1 Design and content of session one

The peer facilitator, AL-SN, opened the session with welcoming and thanking students for coming, adding that the session would be beneficial for all of them at many levels. Then she started to explain that this session was planned to discuss the methodology and steps that should be followed to prepare and succeed in the exams and students were encouraged to participate by stating their individual techniques mentioning the importance of psychological preparedness, having knowledge about the subject matter, individual techniques used to answer including dividing compound questions into separate parts and identifying keywords as well as how to look for reliable sources of information. By the end of the session, students had some brief discussion about the organisation and timing of the following session including the availability of the members and the topic of the discussion and closed the session with thank you and good night. In conclusion, everyone contributed to the discussion in one way or another.

6.1.2 Interactions in session one

Despite having students respond positively in the initial interviews that they could use the webcam without any difficulty, most participants did not use it eventually and used only the audio feature of Skype as their primary means of communication throughout the session except for the peer facilitator, AL-SN, AL-SU, and AL-ST.

While the written-based discussions had a drawback in having students post responses in rapid succession before having a look at what others had posted previously, the verbal interaction seemed to overcome this limitation by allowing students to listen and answer a particular question immediately and elaborate on their thinking, having multiple responses in return without even clicking on the send button. However, there had been an instance when AL-SI

forgot that he was unmuted so, he used the chat box to tell the others that his voice cannot be heard and received an instant response from AL-ST telling him that he needed to click again on the microphone talk button to enable the speaker given that the same thing happened to her but she managed to sort it out immediately.

The discussion in this first session seemed a bit noisy as some students were interfering at the same time and some peers dominated the discussion leaving no space for others to contribute. When the peer facilitator encouraged more participation by inviting some members to contribute to the discussion, AL-SO commented: "this is our first session and it is an improvised discussion, maybe the interaction in the next one will be intense because we will be prepared", whereas AL-SU added: "it is a normal thing to be shy in the first session, it's only a matter of time". This could be because these two participants did not attend the welcoming session and thus, it took time for them to adapt to the Skype environment.

As for members' contributions, just AL-SN, AL-ST, and AL-SH were engaged the most in student-student, peer facilitator-student type of interaction, whereas contributions made by the other five (AL-SO, AL-SM, AL-SB, AL-SU, and AL-SI) were more limited or based on the invitation of the peer facilitator to talk. Student-content interaction, however, was basically initiated by the peer facilitator by asking students to think about the techniques they use for revision and how to prepare for exams and then trying to maximise their engagement with the discussion content by inviting them to speak.

Social interaction took place occasionally as the session progressed and was mostly provoked by the peer facilitator (see Table 6.2); for example, she made a joke about how the discussion was dominated only by female participants. Also, the lack of knowledge about some key features of Skype such as muting the microphone led some social relief to take place and paused the intense focus on the content development; for example, when AL-ST forgot that she was muted, the peer facilitator tried to tell her with gestures that her voice was not heard and when she managed to unmute herself, she told them she thought that she needed to raise her voice, so she was speaking loudly while being muted which made students laugh on the situation.

6.1.3 CoI in session one

As indicated previously, session one of this group was conducted in the first week of August with eight participants attending for 49 minutes (Section 6.1). The discussion of the exam preparation techniques yielded a total of 93 comments that participants were exchanging verbally, and this also included the 2 comments exchanged between AL-SI ($n=1$, 1%) and AL-

ST (n=1, 1%) on the chat during the session about how to unmute the microphone (see Section 6.1.2). These two text-based contributions were counted as well among critical data on the presences, particularly social and teaching presence, so that the impact of interaction on the development and progress of the PL community would not be diminished. In other words, excluding the instances of chat discussions from the analysis would yield an incomplete understanding of not only how the interaction process occurred and how many instances of contributing to the discussion took place, but also the interaction between the verbal and written forms as the instance where they were merged influenced the nature of the discourse that shifted from a content-driven conversation to talking about the comment that was written on the chat. Complementing the analysis of the synchronous sessions with the interview data gave further insight that enhanced understanding of participants' perceptions of the use of microphone and chat in these sessions (see Section 5.2.5).

Having this session as the second Skype meeting after the welcoming session and the first one when participants took full responsibility for their learning, facilitation was needed to keep the discussion moving forward and this was evident from the highest proportion of comments (n=31, 33%) contributed by AL-SN, the peer facilitator (Table 6.2). Each of the remaining seven participants contributed to varying degrees with AL-ST and AL-SH being the main contributors (n=23, 25% and n=11, 12% respectively), followed by AL-SI and AL-SO (n=9, 10% and n=7, 8% respectively) and then, AL-SM, AL-SU, and AL-SB with very limited contributions (n=5, 5%, n=4, 4%, and n=3, 3% respectively).

Each comment of the 93 comments made in this online synchronous session was coded as one of social presence, cognitive presence, and teaching presence (see Table 6.2). With a proportion of (n=47, 51%), cognitive presence dominated this session which was infiltrated by social presence (n=31, 33%) and also fostered by teaching presence (n=15, 16%) that was performed exclusively by AL-SN, the peer facilitator, (n=14, 15%) by providing leadership and steering the discussion; whereas, AL-ST's teaching presence (n=1, 1%) was related to assisting AL-SI to resolve the microphone issue and was therefore considered a technology-related aspect of the design and organisation of the session that is associated with "utilizing the medium effectively" indicator of the teaching presence (Shea et al., 2010). However, teaching presence in this session played a minimal role compared to the other two presences.

Table 6.2 Number of comments as per participant and presence in Session 1 (*N*=93)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
AL-SN (PF)	14	8	9	31 (33%)
AL-SO	0	4	3	7 (8%)
AL-SH	0	4	7	11 (12%)
AL-SM	0	2	3	5 (5%)
AL-ST	1	5	17	23 (25%)
AL-SB	0	1	2	3 (3%)
AL-SU	0	3	1	4 (4%)
AL-SI	0	4	5	9 (10%)
Total	15 (16%)	31 (33%)	47 (51%)	93 (100%)

With reference to all the comments indicated in Table (6.2), social presence and teaching presence played a significant role in fostering cognitive presence and this is evidenced by the order of their occurrence that was investigated when coding each comment against the type of presence using the CoI coding template (see Appendix G). Social presence took place when participants first joined the session and exchanged greetings and the peer facilitator thanked them for coming and also when closing the session with a thank you and goodbye. The instances of social presence that infiltrated the discussion between the beginning and the end of the session are statements of encouragement and appreciation mostly from the peer facilitator for sharing thoughts and answering questions, expressions of feelings about the first experience in the Skype environment (AL-SN, AL-SU, and AL-SO), and humour about the unfamiliarity with the muting feature of Skype (AL-SN, AL-ST, and AL-SI). The occurrence of the cognitive presence in the interaction was mainly coordinated by the peer facilitator's teaching presence as she introduced the topic and encouraged the participants to engage in the cognitive activity of thinking, sharing, and reflecting on the strategies they used to prepare for the exams.

As stated earlier, participants used three communication avenues available on Skype in the online synchronous session: microphone, text chat, and webcam. The most used was the microphone for the verbal exchange between participants but with varying degrees of contribution ranging from the highest proportion of verbal comments made by AL-SN (n=31, 33%) to the lowest proportion of comments made by AL-SB (n=3; 3%), this was followed by the written communication in that two comments were exchanged in the chat between AL-SI (n=1; 1%) and AL-ST (n=1; 1%) about how to unmute the sound. This particular AL-ST's contribution was therefore deemed as a teaching presence because it is regarded as using the medium effectively aspect that is included in the design and organisation category of teaching presence (see Appendix G). The webcam, on the other hand, was used only by AL-SN, AL-SU, and AL-ST which played a substantial role in mediating visual cues and increasing social presence, especially between AL-SN and AL-ST through which the use of gestures by AL-SN reminded AL-ST to unmute her microphone.

Given that cognitive presence was carried out thoroughly by microphone unlike the social and teaching presence that took place in both verbal and written communication through the chat text, it can be viewed that the use of the microphone was easier and adequate to the nature of the discussed topic and therefore compatible with the complexity and the length of the comments that participants were making.

6.1.4 Students' reflections on session one

Students were asked after this session to fill in a reflective log where they can record their experiences by responding to key questions related to their feeling about participating in a synchronous PL session, how they perceived interactions in a PL environment mediated by Skype, the effects of Skype PL on the development of a community of learning and perceived elements of CoI, what they learned and how they evaluate their own and others' participation and engagement in the session, what worked well, and what needed improvement for a better learning experience (see Section 4.2.1.3 and Appendices B and C). Six participants (AL-SN, AL-SH, AL-ST, AL-SM, AL-SO, and AL-SI) out of the eight participants who attended this session returned their reflective logs via email.

All of the six students indicated positive feelings about being a part of the Skype PL session stating that "it felt like being in one room" (AL-ST) and "a new experience that I found better than writing, to some extent. It saves time and effort" (AL-SO), except for the peer facilitator (AL-SN) who admitted that she felt uncomfortable due to being the first experience for her: "It is the first experience and I was uncomfortable at the beginning but I got used to it quickly

because the members were respectful and friendly". Participants also perceived the effects of the Skype PL session on the development of a Community of Inquiry as positive, noting that this environment allowed sharing views and experiences (AL-SI) as well as new relationships to be established (AL-ST, AL-SO, and AL-SN). Perceptions about Skype both as a tool and interactional space were also positive as students commented on their interactions as being "rich and interesting" (AL-SH). AL-SN also added that Skype created "a serious learning environment" and made her learning experience "more personalised" adding that "this space gathered peers with the same purpose, same inclination, same concern, and nurtured the social presence". However, not all of the students had a positive attitude towards the content of the discussion as AL-SI wished to have more practical topics in the next session; also, AL-SM admitted that this session did not cover learning a new topic as expected and therefore evaluating the session as "not good enough".

Most participants (AL-SN, AL-SH, AL-SO, and AL-ST) indicated that having an opportunity to "closely know" (AL-ST) other students who study in the same programme and sharing concerns and experiences were the main positive outcomes of this session. However, they also pointed out many challenges such as the weak internet connection, noisy background, sound issues, and talking over each other alongside other challenges that hindered AL-SN's facilitation such as feeling uncomfortable due to not being able to see the faces of the attendees who did not use their webcam alongside the limited engagement and having students not totally "responsive"; thus, she mentioned the necessity of using the webcam for more interactive learning, while the other participants agreed on tackling practical topics and preparing in advance as the most important areas of improvement for future sessions.

6.2 Session 2: Theories of Applied Linguistics

The second session was conducted on Thursday, August 15, 2019, at 9 p.m. and lasted for approximately 50 minutes. Although the format of the sessions and the features of Skype were previously demonstrated, there was a need to recapitulate some of this, especially for those who missed the first session. The peer facilitator was asked to take a brief moment to explain these aspects to students before starting the main discussion. Seven participants attended the second session, namely, AL-SN, AL-SH, AL-SM, AL-ST, AL-SU, AL-SI, and AL-SD. For AL-SD, this was his first session in which he introduced himself as a middle school teacher of Arabic literature living in the south of the Algerian Sahara Desert. This session did not start only after 5 minutes as the peer facilitator, AL-SN, decided to give time to the latecomers in order to start without the need to repeat anything, three participants including the peer facilitator (AL-SN,

AL-ST, and AL-SD) were the first comers and then others started joining the discussion gradually, only one more participant, AL-SI, joined the discussion after 10 minutes without any interruption.

6.2.1 Design and content of session two

AL-SN started greeting the members and reminding them of the necessity of muting the microphone for those being in a noisy place and clicking on it again when they want to speak to activate the microphone then, she tried to use the feature of sharing the screen to post the past examination paper which was the main topic of discussion (see Figure 6.1) but it did not work for her stating she was participating using her phone; however, they continued the discussion as the paper was posted on the group chat by AL-SN two days before the session so that participants would be reassured about what to be discussed in the session.

The discussion started with a quick welcoming of the members from AL-SN. The communication was verbal through the microphone and only 4 out of 7 members of the group used the webcam, two females (AL-SN and AL-ST) and two males (AL-SM and AL-SH). To start the discussion, an examination paper from previous years was previously agreed on by participants to be the topic of discussion and which included three questions about the difference between Applied Linguistics and general theoretical Linguistics, the most important learning theories, and the ramifications of Applied Linguistics. AL-SN started with reading the text of the question and then asked students to identify the most important key terms and after that, they started discussing definitions of each term and explaining them to each other. Discussing this part lasted around 20 minutes and from there, students moved to answer each of the three questions. Again, when the session was about to finish, AL-SN allowed some time for general questions and additions and then gave a summary of what was covered and reminders about posting past examination papers in advance for the following week's discussion and the session was closed with final farewells.
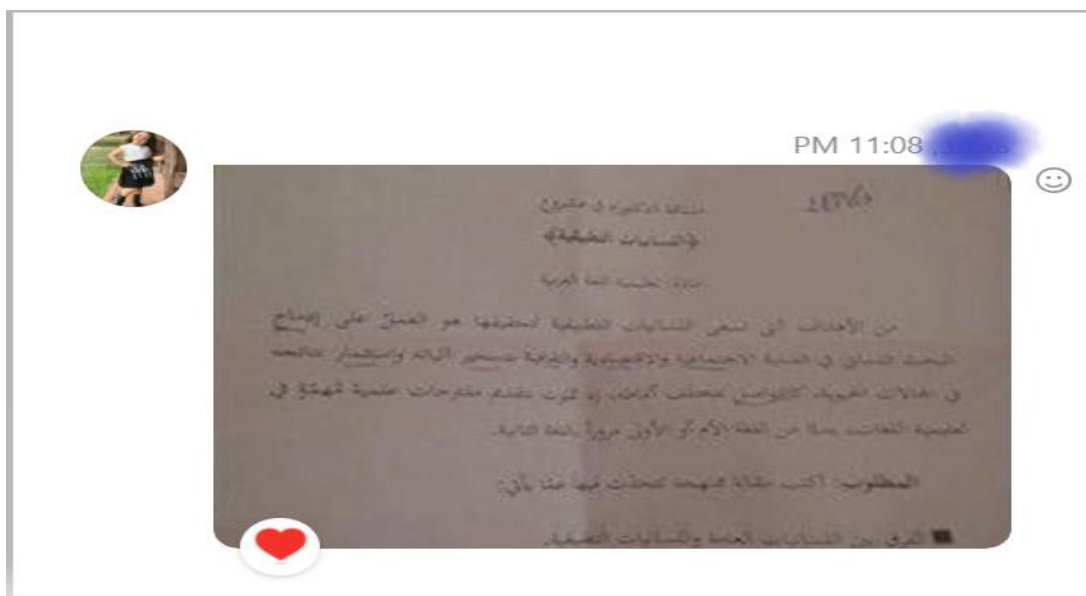
Figure 6.1 Past examination paper posted by the peer facilitator on the Skype group for session two

6.2.2 Interactions in session two

When the video call started, only AL-SN, AL-ST, and AL-SD were active at that time and after that, the remaining students started entering at a variety of times. During this waiting period, social interaction took place when the attended students congratulated each other on the occasion of Eid al-Adha [4] and started talking about how they were juggling daily responsibilities and if there were any new self-evaluation quizzes posted on their online platform. Meanwhile, there had been a noisy sound coming from AL-SD's background so, AL-SN took the opportunity to remind her peers about the feature of muting the microphone. Apart from the social comments, most of the interaction was content-driven in the form of recommendations because students focused on how to answer in the form of an essay and decided on the concepts that needed to be analysed and this paved the way for more student-to-peer facilitator, peer facilitator-to-group, and student-to-student/group interactions, whereas peer facilitator-to-content and student-to-content interactions were in the form of reading the text of the question, underlining keywords and extracting the concepts that the essay should be focussing on.

Working through the questions required some amount of time as it was led step-by-step through the process and most participants were involved in answering the questions and discussing with the exception of AL-SU who remained silent throughout the session (see Table 6.3). In the

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[4] Eid al-Adha is a Muslim festival which marks the culmination of the pilgrimage to Mecca (Lotha, 2021).

beginning, the engagement of the participants was weak as the discussion took place only between AL-SN, AL-SH, and AL-SM and then, as the session progressed, some participants (AL-ST, AL-SD, and AL-SI) started joining the discussion. Thus, to engage students in the discussion, AL-SN brought up a reminder that she was just facilitating and not teaching saying: "This is just a reminder that I am just a peer facilitator which means that the talk is directed to you and you talk more than me". Besides, the content of the discussion was presented verbally to the group as students already had an idea about what they would discuss so, using the microphone rather than the text chat gave everyone an opportunity to voice out their thoughts independently and be listened to rather than just skipping the answer or scrolling more quickly through the comments without considering what has been said.

Social interaction was occurring equally with the content-driven discussion as it appeared in the beginning in the forms of greetings and breaking the silence by talking about personal topics and occurred from time to time in the discussion to break the seriousness as for instance when AL-SN joked about having AL-ST answering a question that was previously done with it: " you will get punished for not following us and being late" and AL-ST responded: "what kind of punishment? is it a hard question again" and then again at the end of the session when AL-SD mentioned that AL-SN seemed to be "well-armed" referring to her good preparation.

Having these positive reflections indicated the level of students' satisfaction with the session and how they were more comfortable than in the previous session to interrupt and clarify points of confusion especially by giving examples of practice from real-life situations or correcting misconceptions such as when AL-SN was corrected by AL-ST when she confused between two terminologies and thanked her for clarifying understanding by commenting "Ah, now I understand, thank you, I thought it was the opposite".

At the end of this session, AL-SN thanked the participants and then AL-ST confirmed that she would be able to post the topic of the next session in advance so that they would have enough time to prepare for the discussion. In short, the interactions were mostly content-driven due to the nature of the topic alongside the complexity of the concepts being discussed.

6.2.3 CoI in session two

As previously mentioned, session two of the Applied Linguistics group was the third Skype meeting after the welcoming meeting and the first session. In this session, the topic of discussion was about the difference between Applied Linguistics and general theoretical Linguistics, the most important learning theories, and the ramifications of Applied Linguistics.

The considerable facilitation helped to maintain the continuity of the conversation and this was proved by the amount of the peer facilitator's comments and contributions (n=50, 44 %) from the overall 114 comments identified in the session (Table 6.3); however, the contribution of the other participants varied and can be classified in order as the following: AL-SH contributing by far the most (n=21, 18%), followed by AL-SD (n=14, 12%), AL-SM (n=11, 10%), AL-ST (n=11, 10%), and then AL-SI (n=7, 6%) whereas, AL-SU remained with no comment throughout the session and preferred only to listen.

Each comment of the total of 114 comments made in this session was coded using the CoI framework as one of social presence, cognitive presence and teaching presence (Table 6.3). Cognitive presence, principally marked by all students except for AL-SU, dominated the session (n= 55, 48%) but slightly decreased compared with the previous session (n=47, 51%; Table 6.2) and with reference to all the verbal comments, teaching presence on the part of the peer facilitator (n=32, 28%) was used to boost cognitive presence amongst the group (n=55, 48%). On the other hand, students' teaching presence (n=3, 3%) was related to explaining why the understanding of two terminologies was incorrect (AL-ST) as well as re-focussing on the topic being discussed (AL-SD). However, teaching presence in this session showed a considerable increase (n=35, 31%) compared with Session 1 (n=15, 16%) due to the nature of the discussion topic and AL-SN's efforts to establish and manage the discussion alongside reinforcing her peers' contributions.

Social presence played a minimal role in this session (n=24, 21%) and even decreased compared with the previous session (n=31, 33%; Table 6.2). As noted previously, social presence took place at the very beginning when students, once entering the Skype session, started greeting each other and congratulated each other on the occasion of Eid al-Adha and the same thing occurred when closing the session with a thank you and farewell. Other instances of social presence were low throughout the session and included a quick talk about the slow internet that affected the voice quality, an apology from AL-SN for the talk in her background while contributing to the discussion, joking about the silence, words of encouragement and thanking AL-SN for being well prepared and monitoring the session effectively. In general, interactions mostly involved fluctuation between cognitive presence and teaching presence as the role of the peer facilitator was important for keeping the discussion going and drawing in cognitive contributions from the other peers.

Table 6.3 Number of comments as per participant and presence in Session 2 (*N*=114)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
AL-SN (PF)	32	8	10	50 (44%)
AL-SH	0	4	17	21 (18%)
AL-SM	0	3	8	11 (10%)
AL-ST	1	3	7	11 (10%)
AL-SD	2	4	8	14 (12%)
AL-SI	0	2	5	7 (6%)
AL-SU	0	0	0	0 (0%)
Total	35 (31%)	24 (21%)	55 (48%)	114 (100%)

6.2.4 Students' reflections on session two

Similar to the previous session, participants were asked to fill in the reflective logs of the second session and send the researcher a copy via email. Six participants (AL-SN, AL-ST, AL-SM, AL-SH, AL-SI, and AL-SD) out of seven who attended this session returned their reflective logs. Participants' comments indicated that they were getting comfortable with the Skype PL environment and that they gained new information (AL-ST, AL-SD, and AL-SI) in addition to the clarification of some challenging aspects of the topic (AL-SI and AL-SH). Participants' perceptions of the effects of the Skype PL environment as well as the facilitation offered by AL-SN on the development of an online community of learning were also positive as managing the session effectively (AL-SH), having an organised plan (AL-ST), and the good facilitation practise (AL-SD) were mentioned as positive incidents encountered in this session. AL-SH, for example, reflected on the growth of the community stating: "it is good that our group is expanding, I got to know some new faces". The peer facilitator also acknowledged her contribution to this session as she commented the following:

In today's session, I felt that I contributed to the understanding of my peers because of the little research I have done before coming to the session and I was happy when my peers told me that they could finally understand the ramifications of Applied Linguistics based on my explanation that was supported by definitions of famous authors (AL-SN)

When commenting on their interactions in this session, participants used terms such as "good" (AL-SI, AL-SH and AL-SM) and "direct and active" (AL-ST) and agreed that they arrived at a common conclusion by the end of the session with comments such as: "We were able to answer all the questions" (AL-SM) and "everything was clear" (AL-SD). Overall, participants indicated that they were willing to attend the next session regardless of the recurring problem of the internet connection that was indicated as causing disruption in the flow of the discussion; however, this was seen by AL-SN as a sign of students' satisfaction with this session mentioning that "although the internet was not helping, participants were still joining, again and again, showing commitment and eagerness to learn and contribute regardless the unfortunate circumstances". Other challenges that students reflected on included the limited participation shown by some members (AL-ST) and the late timing of the session (AL-SI) in addition to the lack of preparation that was sensed by AL-SN who expressed her feeling of being uncomfortable with her peers asking her questions as if she was a teacher and stressed on the need for preparation before coming to the session which most of the participants (AL-SI, AL-ST, AL-SM, and AL-SH) agreed on as a response to what should be done differently in the next sessions; whereas, AL-SH added that attention needed to be drawn on the time spent on finding the keywords which was longer than it should.

6.3 Session 3: Bases of curriculum sources

The third session was delayed from Tuesday, 20 August till Friday 23 August at 9 p.m. due to the unavailability of three members including the peer facilitator that was communicated to the researcher and the whole Skype group which led to the decision of delaying the session. By this stage, participants seemed comfortable with the PL atmosphere as well as the Skype technology, although the issue of internet connectivity was still the main burden. Yet again, this session took approximately the same time as the previous one lasting for 40 minutes and was attended by five students (AL-SN, AL-SH, AL-SM, AL-ST, and AL-SI) despite the many commitments that they had. As the video call started, the peer facilitator and two participants (AL-ST and AL-SM) had entered the call on time and were soon joined by others (AL-SH and AL-SI).

6.3.1 Design and content of session three

The session started with greetings along with a brief reminder from AL-SN about what was covered in the last session and the importance of muting the microphone and opening it when wanting to talk and then began to read the text of the question (see Figure 6.2) that was posted three days before the session by AL-ST and which was about the most important sources of curricula and their bases. Similar to the previous session, AL-SN, the peer facilitator, started by asking questions related to the most important keywords that should be underlined and then moved to review the understanding of these key concepts and what aspects should be focused on while writing the essay. After the initial discussion about the context of the question which took approximately 15 minutes to complete, students started working through the interpretation of the question and possible ways of answering it. Discussion of this latter helped set the scene for working through the structure of the essay.

Students continued the discussion until they felt that they came to an agreed view about the answers on the topic and what concepts they should focus on the most when writing the essay. In the final 5 minutes of the session, the peer facilitator thanked the members for attending and participating in the session and asked AL-ST to post another topic as soon as possible so that they would have the chance to prepare for the coming session and this conversation was followed by the usual farewells and wishes were expressed before ending the call.

Figure 6.2 Past examination paper posted by AL-ST on the Skype group for session three

6.3.2 Interactions in session three

The discussion of the group reached a greater extent than in the previous two sessions which were marked by a question/answer form of facilitation to engage the students and move the discussion forward. Alongside the peer facilitator (AL-SN), AL-SH and AL-SM were the main contributors to the discussion followed by AL-ST and AL-SI. Opening the discussion, reading the topic, and asking the main questions were managed by AL-SN in the form of peer facilitator-to-group and peer facilitator-to-content interactions, student-to-content interaction, however, took place in working through the context of the question by identifying keywords and understanding discipline-related terminologies; student-to-group interaction was in the form of asking questions and contributing ideas; whereas, student-to-student interaction and peer facilitator-to-student interaction were manifested in clarifying ambiguities to each other or correcting misunderstandings, although comments from the peer facilitator as well as from participants were directed to the whole group. Again, participants were using only the microphone to contribute to the discussion.

For the initial stage of the group's discussion, starting with the context of the principal question to stimulate the discussion was a good choice on the part of AL-SN as it added a structure to the discussion. This method had a positive educational implication in that it encouraged participants to be actively involved in collective brainstorming to arrive at an understanding of the context before they were able to move on to the theoretical content. However, this session had less social interaction compared to the previous sessions and the academic debate dominated the discussion. The only instances where the social interaction was evident were at times of waiting for more members to join the discussion, greetings at the beginning of the session, the closing of the session, and goodbyes at the end of the session as usual. In that, when AL-SN wanted to conclude the session and said: "So what we benefited from today's session?", AL-SM commented the following:

> *I refreshed my memory about these terminologies, and I think that they will*
> *be ingrained in my mind even more than a lecture or a lesson from a teacher*
> *because when there is a discussion, the idea gets faster than just sitting and*
> *internalising* (AL-SM)

Additionally, the closing of the session had a more social atmosphere than the previous sessions in that when AL-SN summarised briefly what was covered in the discussion, participants started joking about their individual perceptions of philosophy stating that it should not be considered

as a science but more drawn into a literature subject and then, AL-SN said to AL-SM: "we are closing the session because we failed to change your mind".

Accordingly, AL-SN seemed to have more control over the session and demonstrated several skills of engaging students like calling participants by name to share their views and using encouraging phrases like "I Agree, very good, well done", and because she was using the webcam since the first session, participants in this group felt more comfortable to use their webcam as well and their background was more descent dictating that they were taking the session seriously.

6.3.3 CoI in session three

With five participants in attendance, Session 3 was conducted on the third weekend of August 2019 and lasted for 40 minutes. In this session, the total number of contributions reached 87 comments. This group's discussion covered the different bases of curriculum sources and their classification by researchers.

As evidenced by the proportion of students' comments (Table 6.4), this session had a high degree of participation from the peer facilitator, AL-SN, ($n=34$, 39%) but it was not as high as in Session 2 ($n=50$, 44%; Table 6.3). The other four participants contributed to varying degrees with AL-SM contributing so far, the most ($n=20$, 23%) followed by AL-SH ($n=17$, 20%), AL-ST ($n=10$, 11%), and then AL-SI ($n=6$, 7%). This reflected, to some extent, a more equal distribution of participation by these four participants than in the previous session (Session 2). However, AL-SI's contribution remained quite the same compared with the past session (Session 2) ($n=7$, 6%; Table 6.3 and $n=6$, 7%; Table 6.4).

The contributions that participants made to the discussion were again coded using the CoI framework in terms of social presence, teaching presence, and cognitive presence (Table 6.4). With reference to all the comments, this session marked a relatively high level of cognitive involvement ($n=43$, 49%; Table 6.4) that is similar to the previous session, Session 2, ($n=48$%, Table 6.3). Just like the previous sessions, the cognitive presence remained the highest presence among all the contributions, but it was not as high as in the first session, Session 1, ($n=47$, 51%; Table 6.2).

Table 6.4 Number of comments as per participant and presence in Session 3 (*N*=87)

Participant	Teaching presence	Social Presence	Cognitive Presence	Frequency (% of total)
AL-SN (PF)	17	7	10	34 (39%)
AL-SH	2	4	11	17 (20%)
AL-SM	3	5	12	20 (23%)
AL-ST	1	3	6	10 (11%)
AL-SI	0	2	4	6 (7%)
Total	23 (26%)	21 (24%)	43 (49%)	87 (100%)

Teaching presence, on the other hand, was mostly performed by the peer facilitator AL-SN (*n*=17, 19%) and was lower than her teaching presence in the previous session (*n*=32, 28%; Table 6.3). Teaching presence was not only associated with the peer facilitator as there were instances when other students interfered to facilitate the discussion and made the content more comprehensible to their peers (*n*=6, 7%) and these interferences were higher than in the previous sessions (*n*=3, 3%; Table 6.3). Additionally, although nearly balanced with social presence (*n*=21, 24%), teaching presence in this session (*n*=23, 26%) falls in between that of the first session (*n*=16%) and the second session (*n*=31%) since Session 2 marked more direct instruction and higher level of question and answer type of facilitation to guide the online environment that was still new for all students; hence, teaching presence decreased compared to the previous session (Session 2).

This session (Session 3) marked a slightly increased proportion of social conversations (*n*=21, 24%; Table 6.4) compared with the previous session (*n*=24, 21%; Table 6.3) but was not as high as that of the first session, Session 1, (*n*= 31, 33%; Table 6.2). Instances of social presence occurred not only at times of greetings and farewells but also from time to time to lighten the cognitive load and break seriousness as the cognitive presence shown by students was

remarkably high. The social conversation taking place between students through the content discussion part of this session included talking about the possibility of having a relationship between the quality of sound and the type of the device used, praising each other's answers, using inclusive pronouns showing group cohesion and joking about perceiving philosophy as an independent science. It also included taking the opportunity by the end of the session to reflect on the session and to acknowledge the value of these discussions in helping them to understand and remember some key concepts.

6.3.4 Students' reflections on session three

Consistent with the previous sessions, the five participants who attended the third session (AL-SN, AL-SH, AL-SM, AL-SI, and AL-ST) were asked to record their experience and perceptions of this session in their reflective log and all of them returned it via email. Participants described their feelings about communicating with peers via Skype as being "comfortable" (AL-SN, AL-ST, AL-SH, and AL-SM) and "satisfied as if I am studying in a classroom" (AL-SI). Participants' responses to the effects of Skype PL on the development of CoI were also positive indicating that this session contributed to receiving "knowledge and additional points that were not addressed in the lectures on the platform" (AL-ST) adding that constructing meaning through communication and facilitation of learning were "good" (AL-SN), "easy" (AL-SM and AL-SH) and "normal" (AL-SI) with AL-ST indicating that "AL-SN was managing the session as a teacher". Social presence was also reflected through the comment of AL-ST who stated that "I feel a sense of belonging as if I am present in the university amphitheatre". When it comes to the most important gains from this session, two participants mentioned: "gaining new knowledge and information" (AL-SH and AL-SI) with two adding "correcting understanding of some confusing concepts" (AL-SM and AL-ST) and one noting "the easy use of Skype" (AL-SN). Consequently, this session was evaluated as being "effective" (AL-ST and AL-SH) with AL-SM commenting that "it is successful and purposeful because it is direct audio and video with constructive discussion thanks to direct communication via Skype". Participants, on the other hand, also pointed to some negative incidents they experienced in this session such as the low level of participation (AL-SN), and sound issues due to internet connection (AL-SI). Other than that, participants were satisfied with this session and agreed that they came out of it with joint conclusions and mentioned preparation of the discussion topic as their plan for the next session. For example, AL-ST stated: "I plan to prove my attendance by preparing information and participating more".

6.4 Session 4: Applied Linguistics and human cognitive activity

The fourth session, Session 4, was conducted on Friday, the 6th of September at 9 p.m. and took longer than the previous sessions by lasting for about 50 minutes. Five participants (AL-SN, AL-SH, AL-SM, AL-ST, and AL-SI) attended this session and, as usual, AL-SN, AL-ST, and AL-SH were the first comers and were soon joined by AL-SM and AL-SI.

6.4.1 Design and content of session four

The design of the fourth session was not different from the previous sessions. AL-SN did not start the session until the usual members joined the discussion and then started greeting and thanking them for coming, she also summarised what was covered in the last session and then started reading the main question from the selected past examination paper (see Figure 6.3) that was again posted by AL-ST on the Skype group. The text of the question was about analysing the problems encountered by Applied Linguistics, the main sources on which Applied Linguistics science is based, and the relationship of these sources to human cognitive activity. After that, the discussion followed the usual procedure of identifying the keywords of the question and discussing reasons for their choice. This process followed a gradual progression to lead the group through the stages of discussing how to answer and figuring out the proper answer.

الجمهورية الجزائرية الديمقراطية الشعبية

جامعة عبد الحميد بن باديس– مستغانم

كلية الأدب العربي و الفنون

قسم اللغة العربية و أدابها

امتحان مسابقة مشروع الدكتوراه في اللسانيات التطبيقية

السؤال النظري

اللسانيات التطبيقية مجالات مشتركة، مرتبطة بالفروع العلمية والمعرف الأخرى في موضوع مقاربة اللغة في جميع ميادينها ومستوياتها. وهي علم مت المصادر والروافد في حل المشاكل اللسانية.

حلل في ضوء النص ما يلي:

1. المشاكل التي تضطلع بها اللسانيات التطبيقية؟
2. المصادر الأساسية التي يرتكز عليها هذا العلم؟
3. وعلاقة هذه المصادر بالنشاط المعرفي الإنساني؟

Figure 6.3 Past examination paper posted by AL-ST on the Skype group for session four

Everyone was sharing their views and raising questions to steer the discussion with minimal invitation by the peer facilitator; however, students did not manage to cover all the questions as the discussion around the keywords and the first question took time and also the time was late so, they decided to close the discussion leaving the two remaining questions for the next session.

6.4.2 Interactions in session four

Starting the session followed the usual procedure of microphone testing, greetings, and stating briefly what was covered in the previous session. The facilitation technique of AL-SN was based on combining direct instruction with question/answer facilitation as she started reading the question text and then moved to analyse the context of the question and phasing it down (peer facilitator-to-content and peer facilitator-to-group interactions). Thus, once this initiative had been taken, students followed these steps and interacted with the content by identifying keywords in the main question as well as explaining why they think so and then, moved to the phase of answering the questions.

The use of the microphone and webcam facilitated the direct interaction between participants by using audio and visual communication to develop solutions and enhance explanations. In fact, there were noticeably more student-to-group, student-to-content, and student-to-student interactions and mostly based on clarifying ambiguous aspects of the topic and particularly comments in the form of community building; for instance, when AL-SH and AL-ST were talking about sociolinguistics and decided to exchange reference to widen their perspectives (student-to-student interaction) or when AL-ST was offering answers to the definition of the majority of terminologies covered (student-to content and student-to-group interaction), AL-SI commented that she was doing a great job and that they benefited from her information (student-to-student interaction). These instances of students' interactions indicate how the atmosphere of the group was becoming more friendly and participants showed a great deal of confidence within the group alongside having the social interaction goes beyond just greetings and farewells to merge with the content discussion; for example, when AL-ST responded to a question from the peer facilitator jokingly "you got me, I did not revise this aspect" or when AL-SH decided to use his webcam after a while and it was shortly followed by AL-SM and then by AL-ST who mentioned that "it's only now that we are witnessing massive social participation" and then the peer facilitator joked stating: "let's keep calm otherwise the internet will hear you and runaway". The use of the webcam created a classroom-like atmosphere although it was after 17 minutes from the start of the session unlike AL-SN and AL-SI who joined the session with their webcams on. However, despite using the webcam, the contribution

of AL-SI was still limited and did not show any progress compared to AL-ST whose participation progressed to be the main contributor to the session after AL-SN and followed by AL-SH and AL-SM.

Additionally, skills shown by AL-SN were continuously improving as she was using usual encouraging expressions; for example, "that is a good point" and building on what her peers have said, summarising their views, and asking their consensus to move to the next point.

6.4.3 CoI in session four

The fourth session, Session 4, of this group was conducted by the same five participants (AL-SN, AL-SH, AL-SM, AL-ST, and AL-SI) who attended the previous session (Session 3). This session took approximately the same time as the previous one lasting for 50 minutes (Section 6.4) and yielded a total of 116 comments. The discussion topic of this session was about analysing the problems encountered by Applied Linguistics, the main sources on which the Applied Linguistics science is based and then the relationship between these sources and human activity.

Compared with the previous sessions (Sessions 1, 2 and 3), this session witnessed a higher level of involvement on the part of the peer facilitator contributing with a total of ($n=56$, 48%) comments (Table 6.5). Other participants contributed to varying degrees with AL-ST contributing the most ($n=24$, 21%), followed by AL-SH and AL-SM ($n=16$, 14% and $n=15$, 13% respectively) and then AL-SI ($n=5$, 4%).

What can be noticed from the coding of comments into the three CoI presences (Table 6.5) is that the cognitive presence amongst the participants ($n=48$, 41%) balanced the teaching presence ($n=48$, 41%) and both dominated the discussion over the social presence ($n=20$, 17%) and this latter marked no increase compared with the previous sessions (Tables 6.2, 6.3, and 6.4).

While the cognitive involvement of students ($n=48$, 41%) decreased compared with all the previous sessions, teaching presence increased and the number of comments representing teaching presence contributed by the peer facilitator ($n=42$, 36%) remained high due to the substantial number of facilitating discourse and direct instruction indicators that were important for the complexity of the content covered. The teaching presence contributed by the remaining participants ($n=6$, 5%) was mainly about attempts to re-focus the discussion and make explicit references to outside materials.

Table 6.5 Number of comments as per participant and presence in Session 4 (*N*=116)

Participant	Teaching presence	Social Presence	Cognitive Presence	Frequency (% of total)
AL-SN (PF)	42	9	5	56 (48%)
AL-SH	1	2	13	16 (14%)
AL-SM	3	2	10	15 (13%)
AL-ST	2	5	17	24 (21%)
AL-SI	0	2	3	5 (4%)
Total	48 (41%)	20 (17%)	48 (41%)	116 (100%)

As mentioned in Section (6.4), the nature of the question discussed in Session 4 included three sub-questions and necessitated more guidance to deal with the complexity of the content covered and keep the discussion going.

Social presence (*n*=20, 17%) occurred throughout this session not only in the greetings and farewells parts of the discussion but it took a more focused form of encouragement, more sense of inclusion, participants calling each other by their real names as well as mutual support and acknowledgement of efforts amongst each other.

Again, all the contributions were made through the microphone however, it should be also acknowledged that in this session students took time to turn on their webcams. At first, it was only AL-SN and AL-SI who participated with the webcam being activated from the beginning of the session; however, it was until after approximately 17 minutes that AL-SH turned on his webcam and was immediately followed by AL-SM and AL-ST. Consequently, the number of students using their webcams seemed to be a motivational factor that drove the remaining others to decide on their use as well.

6.4.4 Students' reflections on session four

All the five participants who attended the fourth session returned their reflective logs (AL-SN, AL-ST, AL-SM, AL-SI, and AL-SH). The comments of these participants indicated getting used to the Skype PL environment and communicated positive perceptions on the contribution of this session to the development of their learning community and sensing progress in their learning through collaboration (AL-ST). Again, participants focused on the content aspect as a response to the benefits gained from this session; for example, AL-SH commented: "I came out with a conclusion about the cultural and social dimension of Applied Linguistics" and they described their interactions as being "purposeful and useful" (AL-SI) which resulted in reaching "a collective conclusion easily" (AL-SM). For most participants, this session was "special" (AL-SN), "successful" (AL-SI), and "better than the previous ones" (AL-SM) with AL-SH adding that "there is a noticeable difference and improvement in our performance, coping with the challenges of the internet and even mastering PL via Skype and there was not any regression, it was the best session". In addition to the noise in the background (AL-SI), and the frustration that the internet connection caused, AL-SN also reflected on the inconsistent use of the webcam which confused her thinking that a new member had joined. However, these incidents were viewed by AL-SH as contributing to personal interaction as he mentioned the incident of AL-ST's frozen screen because of her weak internet connection. AL-ST, on the other hand, also mentioned the limited punctuality of some members as another challenge and confirmed this point as an area of improvement with AL-SN adding the need for all members to use the webcam; whereas AL-SI stressed on preparing the topic in advance "for a rich conversation" and AL-SH proposed spending less time discussing keywords and what to include in the introduction part of the essay in the future session.

6.5 Session 5: Applied Linguistics and human cognitive activity (continued)

The fifth session, Session 5, was conducted on the 13th of September, Friday at 9 p.m. and took about 40 minutes as it was planned to cover the remaining two questions of the previous session which were about the main sources on which the science of Applied Linguistics is based and the relationship of these sources to human cognitive activity. In the last session, students covered only the first part of the topic which was about analysing the problems encountered by Applied Linguistics and discussed some of the sources on which this science is based but did not elaborate further on them, mainly because they took a long time in identifying and discussing the key concepts and their historical background so, they decided to leave it for this session alongside the last question about the relationship of these sources to human cognitive activity.

Seven participants attended this fifth session (AL-SN, AL-SH, AL-SM, AL-ST, AL-SD, AL-SI, and AL-SZ) and among them was AL-SZ who attended for the first time and who also introduced himself as a middle school teacher of Arabic Literature living in a coastal city in the North. Four participants (AL-SN, AL-ST, AL-SH, and AL-SZ) were the first attendees followed by AL-SM and AL-SI after 5 minutes and then, AL-SD who joined few minutes later after the peer facilitator started greeting the members and he explained that his internet connection was so weak doubting that he could attend the whole session because of it.

6.5.1 Design and content of session five

AL-SN started reading the questions and asked the members to review the answer to the second question and then move to the last one which had the group share their thinking processes in order to arrive at the answers. Students found these questions a bit complex and attempted to share their views even when they were not sure about the answer, they were even asking further questions which made the discussion last for a longer time and it was only after agreeing about the discussed answers that they concluded the session quickly. At the end of the discussion, AL-SI asked AL-SN about the topic of the next session and she responded that she would post one as soon as possible and made the usual farewells.

6.5.2 Interactions in session five

After the usual greetings and reminders about the microphone, AL-SN started immediately by reading the questions. This allowed participants the opportunity to interact with the content by shedding light on important concepts and collectively understanding the context of the questions. AL-SN, AL-ST, and AL-SI were the main contributors to this session as the participation of the latter, AL-SI, reached a greater extent than in the previous sessions and he even contributed to refocusing the discussion in the middle of the session after a personal interaction between AL-ST, AL-SM, and AL-SN lasted for more than 10 minutes. As for AL-SZ, his contribution was the lowest and when AL-SN invited him to talk, he admitted that he did not have a look at the content prior to the session.

Accordingly, the interaction that mostly dominated the session was student-to-group when participants contributed to the discussion by offering answers and also asking questions directed to the whole group which further expanded the discussion. This was followed by peer facilitator-to-group interaction that focussed on asking questions, checking the mutual understanding of the content to move to the next point and then, student-to-student interaction which was mainly about clarifying ideas and adding to answers; for example, when AL-ST said to AL-SI: "yes,

that's right, and please allow me to add another point to your answer…". These personal interactions also appeared at the end of the discussion when AL-SN asked AL-ST to state briefly what was taken away from this session and AL-ST joked about being pointed out first and commented: "it' s not only women first but also men are the guardians of women" and then, AL-SN answered jokingly that it was "a smart tactical escape". However, during the initial part of the discussion, minimal personal interaction took place as students focussed more on the content of the questions and discussed answers. On the other hand, there had been instances in the middle of the discussion when the personal interaction stemmed from the content that was dealt with; for example, when talking about the environment being a predominant factor to acquire a foreign language, AL-SM narrated his personal experience of learning Spanish within three months while being in Spain and the difficulty he encountered in learning English while being in Algeria.

Although AL-SD and AL-SH were experiencing sound issues due to their weak internet connection forcing them to exit and re-join the discussion several times, this session had more social interaction than the previous ones and all the members used their webcams.

6.5.3 CoI in session five

The fifth session was conducted on the 13th of September 2019 with seven participants attending for about 40 minutes (see Section 6.5). The total number of comments exchanged between participants in this session reached 88 comments. This session was a continuation of the previous one in which participants discussed two questions about the main sources on which the science of Applied Linguistics is based and the relationship of these sources to human cognitive activity.

As demonstrated by the proportion of comments shown in Table (6.6), the peer facilitator, AL-SN, was the highest contributor to this session ($n=24$; 27%), followed by AL-ST ($n=21$; 24%) and AL-SI ($n=18$; 21%) who showed a significant increase in his participation compared to the previous sessions unlike AL-SH ($n=9$; 10%) and AL-SM ($n=9$; 10%) whose contributions decreased substantially; whereas, the contributions of AL-SD ($n=4$; 5%) and AL-SZ ($n=3$; 3%) remained limited. However, it is worth noting that AL-SD and AL-SH experienced sound issues due to their weak internet connection forcing them to exit and re-join the discussion several times while AL-SZ experienced this Skype PL environment for the first time.

Table 6.6 Number of comments as per participant and presence in Session 5 (*N*=88)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
AL-SN (PF)	8	6	10	24 (27%)
AL-SH	0	4	5	9 (10%)
AL-SM	0	5	4	9 (10%)
AL-ST	0	5	16	21 (24%)
AL-SD	0	2	2	4 (5%)
AL-SI	2	4	12	18 (21%)
AL-SZ	0	2	1	3 (3%)
Total	10 (11%)	28 (32%)	50 (57%)	88 (100%)

Again, all the comments contributing to the discussion in this session were coded using the CoI framework (Table 6.6). In terms of the three presences, this session had a high degree of cognitive presence (*n*=50, 57%) and which was also higher than the previous four sessions. This is followed by the social presence demonstrated by all participants in varying degrees. In fact, this session's social presence (*n*=28; 32%) was significantly higher than prior sessions, although it was also nearly similar to that of the first session (*n*=31; 33%). As stated earlier in Section (6.5.2), social presence was evident not only at the start and conclusion of the session but also during the discussion. The occurrence of social conversations was mostly triggered by the sporadic internet connection; for example, upon his entrance to the session, AL-SH raised his concerns about his internet connection to the members of the group who also endorsed his comments and AL-SD also did the same.

Furthermore, social presence appeared through expressing appreciation for clarifications and answering questions as well as arising from the content that was dealt with; for example, social interaction between AL-ST, AL-SM, and AL-SN took place for more than 10 minutes about AL-SM's personal experience of learning a foreign language in an authentic environment (see Section 6.5.2). It also involved the occasional humour by the peer facilitator and AL-ST to

alleviate the heavy concentration on the content such as when AL-ST joked about being pointed out first by AL-SN to give a brief summary of the discussion.

Teaching presence, on the other hand, was considerably low in this session (n=10; 11%) not only in terms of the distribution of facilitation involvement against the cognitive and social presence but also compared with the previous sessions. Referring to all the comments, teaching presence on the part of the peer facilitator, AL-SN, (n=8; 9%) was used to support and maintain a cognitive presence among the members of the group by encouraging participation, presenting follow-up questions after checking that all the members reached consensus alongside summarising discussion contributions; whereas, teaching presence on the part of AL-SI (n=2; 2%) was associated with shifting the focus from the social presence that lasted for more than 10 minutes between AL-SN, AL-SM, and AL-ST to the cognitive presence and hence, refocusing the discussion on the specific question at hand. Thus, given that the topic discussed in this session was just a continuation of the previous session, there had been less occurrence of setting the climate for learning and concept checking questions that AL-SN used in the previous sessions to encourage the exploration of keywords before moving to work through questions together.

Although this session was somehow disjointed because of the weak internet experienced by most members especially AL-SD and AL-SH who were leaving and re-joining the session several times, all members were comfortable using their webcams yielding high levels of social and cognitive engagement as well as decreased level of facilitation in that the presence of visual cues made it unnecessary for AL-SN to be involved in stimulating and facilitating the participants' interactions. Additionally, this session marked no use of the chat text in that all contributions were made using the microphone which made it easier for participants to exchange lengthy comments and complex thoughts which may take time to express when using the text chat.

6.5.4 Students' reflections on session five

The researcher received via email six reflective logs (AL-SN, AL-ST, AL-SH, AL-SM, AL-SI, and AL-SD) out of the seven participants who attended this session. All these logs indicated that participants were comfortable with the Skype PL environment and found these sessions useful with AL-SN commenting that she finally got to see all the faces and AL-SM mentioning that it felt like "sitting in the same room". Their responses to the benefits and outcomes of this session included the usual gains such as "clearing confusion" (AL-SH) and "learning new things from my peers every time" (AL-SI). However, AL-ST expressed her doubts about the validity

of the conclusions they were making in that the questions were too complex to have quick answers adding that "we need a teachers' view to know whether our conclusions are right"; whereas, AL-SD, AL-SM, and AL-SN seemed to be confident stating that they agreed on the answers and reached a common conclusion. On the other hand, participants sensed the development of their community but added few comments such as "the more the better" which was made by AL-SH who expressed his disappointment of having a small number of participants adding that this "hindered the trajectory of peer learning". Other than that, all participants agreed that this session was beneficial in terms of "enriching knowledge" (AL-SI) and "collective revision" (AL-SH), except for AL-ST who perceived this session as "not good as the previous one". Comments on interactions in this session were also encouraging despite the challenges that these participants reflected on such as sound issues (AL-SD and AL-SH), sporadic internet connection (AL-ST, AL-SI, and AL-SM), and "the members coming with no preparation" (AL-SN). This latter was also mentioned as an area that needed improvement alongside the timing of the session which AL-SM viewed as late preferring the morning time.

6.6 Session 6: Contemporary linguistic theories

The sixth session, Session 6, was conducted on Friday, 20 September at 9 p.m. and took even more time than the previous ones lasting for 52 minutes. As this session was scheduled as the last one, apologies for non-attendance were not expected in that it was mutually understood that not all students were able to attend. Seven participants attended the sixth session (AL-SN, AL-SH, AL-SM, AL-ST, AL-SD, AL-SI, and AL-SZ), two participants, AL-SN and AL-SI, were the first comers followed by the remaining students (AL-SH, AL-SM, AL-ST, AL-SD, and AL-SZ) after a couple of minutes.

6.6.1 Design and content of session six

The design of this session was completely consistent with the previous sessions; the peer facilitator (AL-SN) decided to give some time to the remaining members before starting the session and meanwhile, she was talking to AL-SI about how she wished to have more sessions in the future. Following the entrance of the remaining members, AL-SN used the usual method of reading the text of the question (see Figure 6.4) that she already posted on the Skype group four days before the session, and that reads as follow: "Many Arab studies try to apply modern and contemporary linguistic theories to the Arabic language in an automatic application, analyse and discuss with examples"; then, she asked to start analysing the context of the question first before dealing with the answer by inviting students to extract the key concepts and explaining

them and from there, they moved on to thinking about the answers. Following this structure to the discussion allowed for reinforcing understanding and clarifying any misunderstandings.
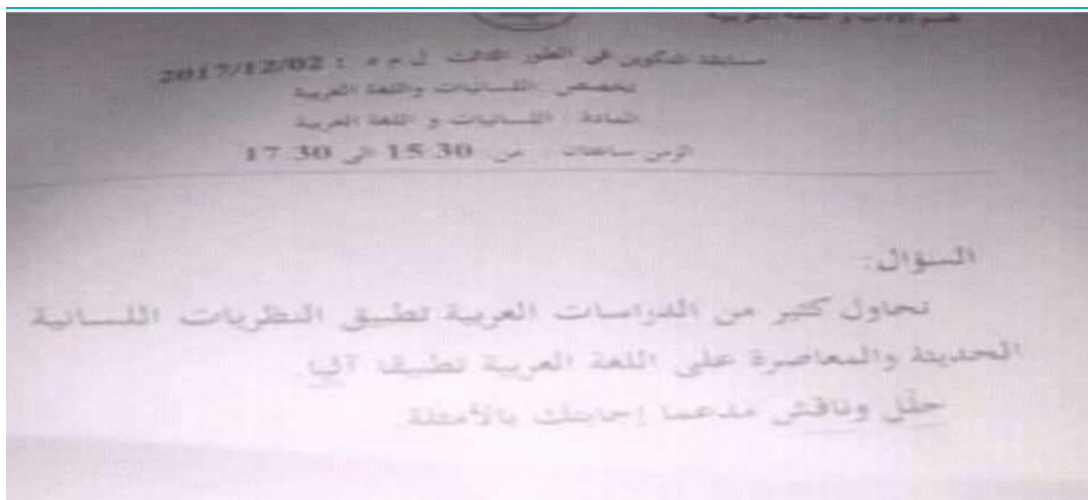
Figure 6.4 Past examination paper posted by the peer facilitator on the Skype group for session six

Again, all participants seemed comfortable using their webcams and they were using the microphone to contribute to the discussion except for AL-SI who experienced sound issues due to his internet connection. The end of the discussion was dedicated to expressing appreciation to the peer facilitator who concluded with "thank you" and "let's continue using this group; this is not our last meeting" (AL-SN).

6.6.2 Interactions in session six

The opening of the session was not different from the previous sessions; AL-SN started by greeting the participants and then stated a brief summary of what was covered in the last session; after that, she started reading the text of the question (peer facilitator-to-content interaction) and invited the members to extract the important keywords as usual (peer facilitator-to-group interaction). Following the lead of the peer facilitator, participants also interacted with the content by analysing questions and discussing keywords and discipline-related terminologies. Thus, interaction in this session was mostly peer facilitator-to-group as the discussion was introduced, directed, and re-focussed by AL-SN. Instances of student-to-group interaction were also captured as the elements of the question were collectively discussed and answers were provided and directed to the whole group. Similarly, student-to-student interaction appeared for example when AL-SI assisted AL-ST with some clarifications as a response to her question

regarding the evaluation of El Hadj Salah's work about "the computerization of Applied Linguistics".

However, other than in the very beginning and at the closure of the session when participants were talking about how they got used to these sessions and how helpful they were, very little personal interaction appeared in the middle of the session, which was mainly triggered by AL-SI's sound issues so, the members asked him about adjusting the speaker of the headphone to be clearly heard but he explained that it was because of the internet and not the headphone. Even the peer facilitator-to-group interaction was little compared with the previous sessions and was a mixture of asking questions to facilitate the discussion and reassuring mutual understanding before leading to the next part of the discussion.

In a nutshell, participants showed a heavy concentration on the topic and content of the questions and almost everyone contributed an answer for those questions, except for AL-SZ and AL-SD who showed limited participation.

6.6.3 CoI in session six

With seven participants in attendance, Session 6 of this group lasted for about 52 minutes (see Section 6.6). In this session, 94 comments were identified and the text of the question dealt with was: "Many Arab studies try to apply modern and contemporary linguistic theories to the Arabic language in an automatic application, analyse and discuss with examples".

As evidenced by the proportion of comments (n=24, 26%) contributed by the peer facilitator (see Table 6.7), Session 6 had a relatively low level of involvement on the part of AL-SN compared with all the previous five sessions, but she still was the highest contributor to this session. The other participants contributed to varying degrees with AL-ST and AL-SI contributing by far the most and with similar proportion of comments (n=20, 21%) and then followed by AL-SH (n=11, 12%), and then AL-SM (n=9, 10%); however, AL-SD and AL-SZ were relatively quiet (n=6, 6% and n=4, 4%, respectively).

Again, in order to code the contributions to the discussion in this session in terms of the three presences (Table 6.7), the CoI framework was used. With reference to all the contributions made, cognitive presence amongst the participants, as in the previous sessions, ranked the highest (n= 53, 56%) and was almost equal to that of Session 5 (n=50, 57%) but still remained higher than the cognitive presence in Sessions 1, 2, 3, and 4 (Tables 6.2, 6.3, 6.4 and 6.5).

However, teaching presence (n=19, 20%) marked an increase compared to that of the previous session (n=10, 11%) and was almost equal to the social presence (n=22, 23%; Table 6.7). The highest proportion contributing to the teaching presence belongs to the peer facilitator (n=14, 15%) as the content of the discussion necessitated more facilitation to move from one point to the next one whereas, contributions of AL-ST (n=3, 3%) and AL-SI (n=2, 2%) to teaching presence were particularly related to the presentation of follow up topics and making explicit reference to outside materials.

Table 6.7 Number of comments as per participant and presence in Session 6 (N=94)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
AL-SN (PF)	14	6	4	24 (26%)
AL-SH	0	2	9	11 (12%)
AL-SM	0	2	7	9 (10%)
AL-ST	3	4	13	20 (21%)
AL-SD	0	1	5	6 (6%)
AL-SI	2	5	13	20 (21%)
AL-SZ	0	2	2	4 (4%)
Total	19 (20%)	22 (23%)	53 (56%)	94 (100%)

Social presence, on the other hand, (n=22, 23%) did not show any marked progress and was lower than the social presence represented by students in the previous session (n=28, 32%). Instances of social conversations can denote that students were too immersed in finding ways to answer the question so, their social contributions were mainly in the form of salutations at the beginning of the session and goodbyes at the end and few other instances in between like speaking about the quality of sound, a thank you for explaining something ambiguous, expressing appreciation, and joking about having AL-SI well-prepared for the session; this was apparent through the proportion of contributions that he made (n=20, 21%) and which was noticeably higher than all the previous sessions.

Consistent with all the previous sessions, students were using the microphone as the main tool to communicate with each other and voice out their thoughts; however, it should be also acknowledged that all students who were active in this session, and the previous discussions, preferred to use their webcam and entered the session with their webcam being turned on except for AL-ST and AL-SD who used their webcam only after a while from joining their peers; this made the discussion more personal and humanised and even reduced instances of talking at the same time or tending to confuse each other's names.

6.6.4 Students' reflections on session six

Five participants (AL-SN, AL-ST, AL-SM, AL-SH, and AL-SI) out of the seven participants who attended this session returned their reflective logs via email. All participants indicated that they got used to these sessions and that they were no longer intimidated by the Skype PL environment. Their comments on the interactions were also positive, focussing on the peer facilitator's role and the collective discussion of the content as being the main important aspects contributing to the success of this session. For example, AL-SM commented that "collective revision made me more concentrated than revising alone" with AL-SH stating "it is an efficient discussion and shared knowledge", and AL-ST adding "great command of the discussion on the part of the peer facilitator". All these positive perceptions indicated that the learning community was progressing well even for the peer facilitator (AL-SN) who stated that she became comfortable with her role adding that it was "an enjoyable experience and I am happy to be a part of it". Participants also commented that they reached a common conclusion and that Skype was very helpful; for example, AL-SN indicated that it facilitated engaging in a discussion and debating with her peers without worrying whether her answer was correct or wrong and made it easy to communicate from home as if she was in a classroom. For all participants, this session was engaging because it yielded a fruitful debate and a sense of progression in terms of learning new content and also other aspects such as: "new techniques of learning and revision" (AL-SH), "managing a discussion" (AL-SN and AL-SH), and correcting misconceptions (AL-ST and AL-SI). Again, the internet connection remained a major issue for some participants resulting in sound issues (AL-SI, AL-SH, and AL-ST) alongside the limited participation (AL-SN) and spending a long time in the introduction and defining keywords (AL-SH) which were also mentioned as recommendations for better facilitation.

6.7 Summary

This chapter looked into the types of interactions that took place in six online synchronous sessions to promote the PL experience of students enrolled in an Applied Linguistics DL programme, as well as the nature of the discourse and issues surrounding online interaction between students and their peers in this discipline context, thereby addressing the study's third and fourth aims (Section 1.2). To get a better understanding of how a peer-based online community functions in a Skype synchronous setting and what role it plays in supporting the DL experience of these students, this chapter provided a thick description supported by analysis using the CoI framework and students' reflective logs.

The nature of the interaction amongst the participants and between the participants and the content discussed was explored using the recordings of the sessions. Examining the nature of these interactions further using the CoI framework's three presences increased understanding of the value of this online environment and its contribution to community-building and maximising the learning of distance students.

Using the CoI framework to analyse the recordings of the online synchronous sessions revealed not just more about the nature of the interactions, but also how the dynamics of the interactions changed over time. Cognitive presence was the most prominent of all the presences in all the six sessions, followed by social presence and then teaching presence (Figure 6.5) which was performed mostly by the peer facilitator whereas the other students' teaching presence did not show any progress across the six sessions (see Tables 6.2, 6.3, 6.4, 6.5, 6.6, and 6.7) preferring to let the lead to AL-SN from the start as she showed enthusiasm and ability to provide leadership throughout the discussion. Sessions 2 and 3 had comparable presence distributions, with roughly 50% cognitive presence, 20% social presence, and 30 % teaching presence. While cognitive presence remained steady at around 50% for the first three sessions (Sessions 1, 2, and 3), it dropped significantly in Session 4 before increasing in Sessions 5 and 6 (Figure 6.5). Similarly, compared with the other five sessions, Session 4 had the lowest amount of social presence but the largest proportion of teaching presence that balanced the cognitive presence which might be explained by the intricacy of the content covered and the number of concept checking questions alongside providing additional explanations and making explicit references to outside materials in an attempt to enhance comprehension and reduce confusion that students were experiencing about some discipline-related concepts and because students took so long in the concept checking questions phase that was performed almost exclusively by the peer facilitator, the following session, Session 5, marked the lowest rate of teaching presence and the

highest proportion of cognitive engagement as students were trying to work through the remaining questions from Session 4 which they were perceived as being difficult to answer (see Section 6.5.4).

The difference in the distribution of social presence across the six sessions (Figure 6.5) also could be explained by the extent of the occurrence of external factors such as internet connection, background noise and problems with the microphone as well as the nature of the content discussed that stimulated students to share their experiences as well as personal feelings given that social presence was markedly higher in session one because the content discussed was not as complicated as the following sessions and sense of community did not take time to establish which might be because of AL-SN's strong social character and self-disclosure that was evident in her conversations which had a positive impact on the group cohesion. The development in the students' sense of community was also documented in their reflective logs. Key findings to emerge were that participants of this group found the Skype synchronous sessions to be beneficial and added value to their DL experience. This was associated with understanding the content, information exchange, and sharing personal experiences. However, building an efficient online learning environment was influenced by certain factors such as the weak internet connection, background noise, the lack of visual cues in some sessions, and the learning culture suggesting that these discussions should be supplemented by additional contributions on the part of a teacher to deepen inquiry and confirm understanding. This was also evidenced by taking time to understand the role of the peer facilitator. Building on this, students' motivation and willingness to take responsibility for their own learning were also critical factors in the formation of this online community. The information gathered from the responses to the initial and final interviews enhances the results of these analyses (see Chapter 5).

Given that the data collection process of this case study overlapped with the second case of the Local Administration group, identical systematic descriptions will be presented in the following chapter as there was no difference in the treatment of the two cases.
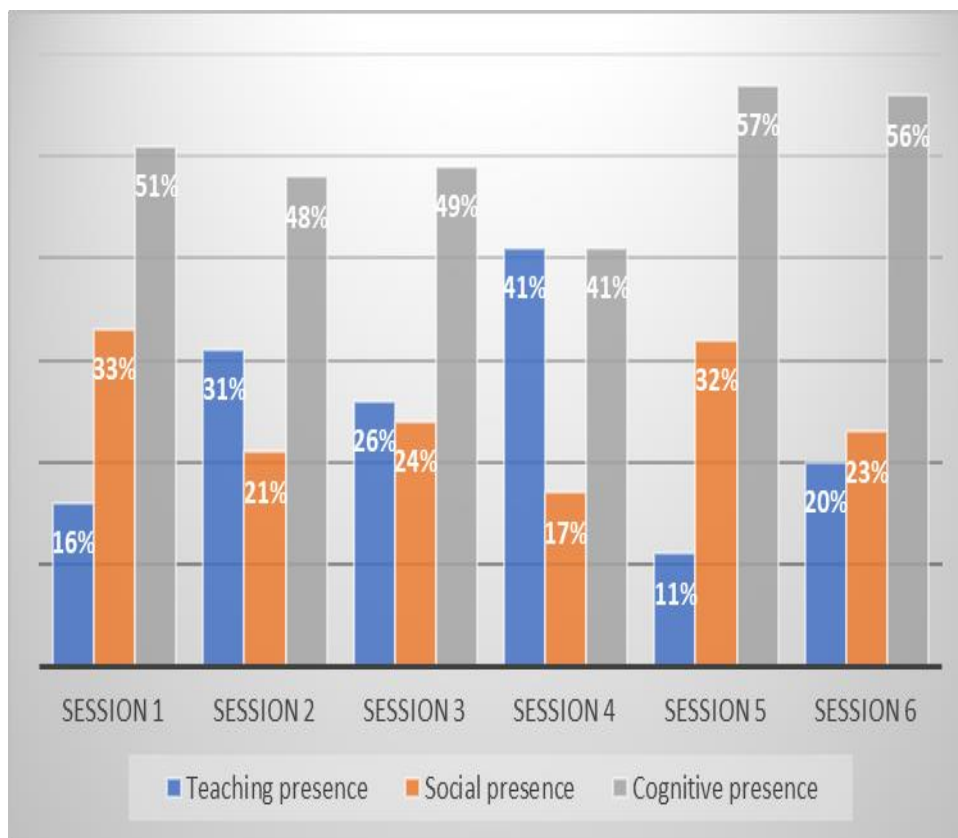
Figure 6.5 The distribution of the three CoI presences across six Skype PL sessions in the Applied Linguistics discipline context

Chapter Seven: Online Synchronous Sessions of The Local Administration Group

Similar to the previous chapter, the purpose of this chapter is to analyse the interactions in the online synchronous PL sessions mediated by Skype and the nature of the peer-led discussions for the Local Administration discipline context. Following Denzin and Lincoln's (2005) thick description approach to analysis, all the six sessions were analysed in terms of design, content, and type of interaction (student-peer facilitator, student-student, and student-content interactions). In addition to this, the CoI coding template was also used as a guide for content analysis to provide a different and comprehensible view of the nature of interactions taking place in all the six sessions and that was supported by students' reflections as well. Thus, each comment that was contributed by each individual either verbally using the microphone or in writing using the text chat after starting the recording was considered as a unit of analysis and was also numbered in order of appearance and the type of presence represented by each was indicated. The coding of the comments as social presence, teaching presence, or cognitive presence (See section 3.5) also enabled indicating any changes in the interactions' dynamics over time. Thus, a total of 998 comments were identified across the six sessions of this group and this include 117 comments in Session 1, 121 comments in Session 2, 167 comments in Session 3, 223 comments in Session 4, 170 comments in Session 5, and 200 comments in Session 6.

The first session (Session 1) of the Local Administration group was conducted on the 10th of August 2019 in which the welcoming part took place in the first 20 minutes followed by the discussion of the first topic which was about the interpretation of legal texts. After this first session, other five sessions were conducted between August and September. Prior to the first session, participants were provided with PowerPoint slides and a word document (see accompanying material) to give information about the role of the peer facilitator as well as instructions on how to establish the ground rules of the discussion and use the different features of Skype. When it came to deciding on the meeting time for the sessions, students used Skype's poll feature to vote on the time that best suited them, which was generally between 7 and 9 p.m. on Friday or Saturday evenings.

The Skype environment allowed participants to experience different functions such as audio calls using the microphone and video calls using the webcam, scheduling meetings using Skype poll, and also the text chat and sharing documents which were the least used features for this

group. With the consent of the participants, all the sessions were recorded using the Skype recording feature and were also saved and downloaded in an MP4 format.

Similar to the first group, the researcher acted as a passive observer in all the sessions and the only instance when she interacted with the members of the group was at the introductory part that took place at the very beginning of the first session in order to welcome students and offer suggestions on how to manage the discussion as well as checking whether students had any problem with using Skype and its various features. It was also an opportunity for students to have a verbal discussion about what was previously mentioned in the chat pertaining to the selection of the peer facilitator whereby LA-SK volunteered to be the peer facilitator as well as the topics to be covered for each session as students decided to do a general revision of six different modules, one module for each session listed in the following order: The interpretation of legal texts, collective labour disputes in public institutions and administrations, disciplinary system for public employees, special administrative labour disputes, administrative control in the field of public health and the environment, and public transactions. During the introduction part, it was found that three participants (LA-SS, LA-SA, and LA-SR) were already familiar with each other and for the rest, it was the first time they met. It was also found that they lived in cities located in the northern part of the country and most of them were working in different jobs related to administration and Law, except for one participant (LA-SL) who was a housewife.

The timing of these sessions was close to the period of exams which allowed students the opportunity to revise together by choosing to dedicate one module for each session and discuss what they found challenging about that particular module. Because the majority of students did not use their webcams, the lack of visual cues slowed the interaction to be established and to move from only a question and answer discussion between two to three members to a collective engaging discussion. Thus, the type of interaction taking place (peer facilitator-student, student-student, or student-content interaction) varied from one session to another and was determined by the nature of the discussions being undertaken in the sessions which included discussion of discipline-related terminologies, administrative decrees, and probing questions that stemmed from real-life scenarios and case studies which altogether can be said to be based on the approach of inquiry-based learning. However, social conversations were mostly derived from the content or linked to technical support regarding working with Skype.

Additionally, the number of participants in this group never reached the full complement of volunteered participants ($n=15$) as the highest number of participants attending the Skype

sessions was 10 in the third session whereas the lowest number was 8 in the sixth session and only 7 participants were consistent in attending all the six sessions as shown in the following table (Table 7.1) which summarises the participation of 11 participants out of 15 who will be included in the analysis of the data given that LA-SQ, LA-SW, and LA-SX did not respond to any of the sent emails or messages after conducting the first interviews; whereas, LA-SV apologised in advance for not attending the sessions explaining that she won't be comfortable participating in a group that includes male participants.

When the students who showed inconsistency in attending the sessions (LA-SF, LA-SC, LA-SJ, and LA-SE) were asked about the reasons for their unavailability to attend some sessions, their responses included poor internet connection and lack of time due to personal commitments.

Table 7.1 Local Administration students' details and participation in the six Skype sessions

Local Administration students	Gender Male/Female	Age (~years)	Sessions attended
LA-SK (PF)	Male	~42	Sessions: 1, 2, 3, 4, 5, 6
LA-SS	Female	~37	Sessions: 1, 2, 3, 4, 5, 6
LA-SY	Female	~34	Sessions: 1, 2, 3, 4, 5, 6
LA-SL	Female	~37	Sessions: 1, 2, 3, 4, 5, 6
LA-SF	Male	~27	Sessions: 1, 2, 3, 4
LA-SC	Male	~31	Sessions: 1, 3
LA-SA	Female	~38	Sessions: 1, 2, 3, 4, 5, 6
LA-SG	Male	~55	Sessions: 1, 2, 3, 4, 5, 6
LA-SR	Female	~43	Sessions: 1, 2, 3, 4, 5, 6
LA-SJ	Female	~29	Sessions: 2, 3
LA-SE	Male	~52	Sessions: 4, 5, 6

7.1 Session 1: The Interpretation of legal texts

Unlike the group of Applied Linguistics who had a welcoming session planned in advance of the first session, the first session of the Local Administration group started with an introductory part that took about 20 minutes and therefore the whole session lasted for one hour and 20 minutes. This session was conducted on the 10th of August, at 9 p.m. and was attended by nine participants (LA-SS, LA-SK, LA-SY, LA-SL, LA-SF, LA-SC, LA-SA, LA-SG, and LA-SR). The 20 minutes of welcoming and orientation about the Skype discussion environment served as an icebreaker, during which the researcher went through the word document about the role of the facilitator and the slides about rules of group conduct (see accompanying material) that were already sent to the group four days before the date of the session to make sure students have enough time to look at them. After that, students discussed that they wanted their sessions to be a general revision of some challenging modules and mentioned that they were ready to start immediately so, the researcher gave the word to the student facilitator (LA-SK) to facilitate the remaining of the session.

7.1.1 Design and content of session one

Students preferred to start directly in discussing the first topic mentioning that "everything is clear" (LA-SS) and the peer facilitator (LA-SK) started with an open-ended question about a challenging legislative case that was mentioned in their "interpretation of legal texts" module but not fully explained and asked about the members' views. This led students through the steps to work out that case and consider why it was treated in such a way, what were the wrong and right steps taken, the consequences of the wrong steps, whether there was a possibility to be rectified, and how.

All participants indicated an understanding of how the sessions should work even when some distractions like background noise were occurring, they were eventually eliminated and students showed active participation; some were interfering to correct misconceptions, and others were providing additions whereas, some preferred just to listen without any interference. This session was somewhat longer than the ones of the Applied Linguistics group mainly because of the number of "stuck places" students were trying to get past and secondly, because of the limited experience in using the different features of Skype, for example muting the background sound which caused a problem in having the members listening to the intervention of each other. However, the chat box was used in this session for asking permission to speak as LA-SS preferred to use the chat box to mention that she had something to add, and the peer facilitator read the message and immediately invited her to speak. The discussion was concluded only

when students felt that the confusion around the proposed case study was erased; while for the rest of the session, students were asking questions like "are we going to have a session at the same time" and encouraged each other to prepare for the next session so that it won't be messy or improvisational as LA-SY noted and then closed the discussion with a "thank you" and "goodbye".

7.1.2 Interactions in session One

Only LA-SK, the peer facilitator, was using the webcam in this session; although LA-SF joined the discussion with his webcam on, he turned it off after a few minutes. The chat box was also used to request interference; however, regardless of the noisy background and the simultaneous interventions, students' participation was intense as the main contributors to this session were LA-SK, LA-SA, LA-SS, and LA-SY followed by LA-SF, LA-SL, and LA-SR with limited contribution; whereas, LA-SC and LA-SG remained silent throughout the discussion. Thus, most students were involved in student-to-group interaction to collectively analyse and discuss the case study. Instances of student-to-student interaction took place when LA-SR interfered to correct the number of the decree stated by LA-SA or when LA-SA thanked LA-SY for mentioning an important point and added to her idea by giving an example from her workplace. Students' engagement with the content, on the other hand, was in the form of analysing the proposed case study and identifying problems and solutions pertaining to that particular case. However, student-to-peer facilitator interaction occurred when LA-SA asked LA-SK for permission to interfere whereas, peer facilitator-to-group interaction was focused on facilitating the discussion by asking probing questions, inviting participation, and refocusing the discussion by interfering to drive the conversation back to the case study after LA-SS, LA-SA, LA-SY, and LA-SF were talking, for about 10 minutes, about the challenges they encountered in their DL programme.

In fact, social interaction was already established in the first 20 minutes and after that, there had been so many instances of participants talking directly to each other. For example, when LA-SF was invited by LA-SK to speak but he explained that he was sitting in the corner of the room next to the wifi box while his house was full of guests. He was very apologetic that he could not contribute but it actually made participants laugh about the situation and gave them an opportunity to open up about the place they were connecting from and what was happening around them at that moment. This brought students closer to each other and created more bonding alongside comments such as "Ah, I did not know this before" and "thank you, now I get it" which helped to build a more relaxed atmosphere and lightened the intensity of the

discussion by making students seem more real and close to each other despite connecting from a device.

7.1.3 CoI in session one

The first session of the Local Administration group was the participants' first experience of the synchronous PL environment, and which started with 20 minutes long introductory part that was followed by one hour of discussion on the topic of the interpretation of legal texts. This session was attended by nine participants, LA-SS, LA-SK, LA-SY, LA-SL, LA-SF, LA-SC, LA-SA, LA-SG, and LA-SR, and therefore resulted in identifying a total of 117 comments that were exchanged verbally using the microphone except for one comment that was made by LA-SS using the chat box to ask permission for adding something and once LA-SK read her message, he immediately invited her to speak. Again, the comment posted on the chat text during the discussion was also considered among the critical data on presences; this was to ensure that the impact of interactions on the development and progress of the PL community would not be diminished.

As this was the first session, the great deal of facilitation helped keeping the discussion going and this was evident from the number of comments (n=30; 26%) contributed by LA-SK, the peer facilitator (Table 7.2) indicating his high involvement in this session. The participation of the remaining members of the group was to varying degrees with LA-SS, LA-SY, and LA-SA being the highest contributors after LA-SK (n=23; 20%, n= 22; 19%, and n= 21; 18% respectively), followed by LA-SF, LA-SR, and LA-SL (n=8; 7%, n=7; 6%, and n=6; 5% respectively) whereas, LA-SC and LA-SG remained silent throughout the discussion and did not make any contributions (n=0, 0% and n=0; 0% respectively).

Again, the content of all the comments contributed by each participant (n=117) after the first 20 minutes of the introductory part was coded in terms of teaching presence, social presence, and cognitive presence (Table 7.2). The highest proportion marked in this session was that of the cognitive presence (n= 66; 56%), which was followed by the social presence (n=37; 32%) and then, the teaching presence (n=14; 12%) that only played a minor role in this session and mostly achieved by LA-SK (n=12; 10%) to enhance the cognitive engagement of his peers whereas, amongst all the participants, only LA-SS contributed to teaching presence (n=2; 2%) as it was related to refocusing the discussion and changing its course from social interaction to keeping participants on topic and was therefore considered as a teaching presence.

Table 7.2 Number of comments as per participant and presence in Session 1 (*N*=117)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
LA-SK (PF)	12	10	8	30 (26%)
LA-SS	2	3	18	23 (20%)
LA-SY	0	6	16	22 (19%)
LA-SL	0	3	3	6 (5%)
LA-SF	0	5	3	8 (7%)
LA-SC	0	0	0	0 (0%)
LA-SA	0	7	14	21 (18%)
LA-SG	0	0	0	0 (0%)
LA-SR	0	3	4	7 (6%)
Total	14 (12%)	37 (32%)	66 (56%)	117 (100%)

Social presence and teaching presence played a significant role in setting the scene for the cognitive presence to take place, especially since this session offered a space for participants to discuss questions they had when revising alone as indicated in Sections (7.1 and 7.1.2). In line with this, social presence was particularly noticeable in the greetings at the beginning and at the end of the session in the forms of "thank you" and "goodbye" reflecting the development of interpersonal relationships between participants whereas, in the middle of the session, a social presence appeared again in the form of expressing appreciation for clarifications, humour, and social sharing to alleviate the high interaction between teaching presence and cognitive presence. For example, when LA-SY and LA-SA talked about the place they were connecting from after LA-SF told LA-SK, when invited to share his thoughts, that his house was full of guests and that he was sitting in the corner of the room next to the wifi box. On the other hand, although the teaching presence marked the lowest proportion, with reference to all the comments, it played a vital role in eliciting cognitive contributions to the discussion and defining the boundaries of social presence to maintain purposeful communication by refocusing the discussion and presenting follow up topics.

As stated earlier, this session included the use of the microphone for most of the communication, the chat text was used only once by LA-SS to ask for permission to interfere, explaining in the final interview that she had something to add but she could not interfere because others were

contributing to the discussion at the same time. This particular interaction replaced visual cues such as raising the hand in the classroom given that very limited visual cues were marked in this session as only LA-SK was comfortable using the webcam. However, it is worth noting that LA-SK preferred to use the microphone instead to reply to LA-SS's request to interfere. This could be explained by the ease of the mutual interaction with this technology, hence the use of the microphone was appropriate for the complexity of the topic and comments made, as writing a comment in text chat was not as easy as verbally communicating long and loaded comments.

7.1.4 Students' reflections on session one

Similar to the Applied Linguistics group, students of this group were asked to fill in a reflective log after each session to document their experiences and reflect on the process of community building including their perceptions of CoI elements (see Section 4.2.1.3 and Appendices B and C). Seven participants (LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, and LA-SR) out of the nine participants who attended the first session returned the reflective logs via email and all of them described being a part of the Skype PL session as a positive experience and that they were willing to attend the next one with responses such as " it is better than revising alone" (LA-SY), "it is not different from gathering in the library to revise together" (LA-SS), and "I felt as if I was studying in a classroom and not at a distance" (LA-SA). However, LA-SR commented that: "I felt that this first session was improvised, and some students were not prepared before coming to the session". The effects of this Skype PL session on the development of the community of learning were also perceived to be positive as all students commented that this environment enhanced their learning and sense of belongingness. Most participants (LA-SL, LA-SS, LA-SR, and LA-SY) specified that learning new information and correcting misconceptions were the main positive outcomes of this session; whereas the peer facilitator (LA-SK) added that managing a discussion remotely and audio-visually is the most important thing achieved from this session. Generally, all participants were satisfied with the session indicating that many issues were clarified and that they managed to reach a common conclusion. Besides, students described all their interactions as "good" (LA-SR, LA-SA, and LA-SK), "easy-going" (LA-SL), and "effective" (LA-SS) in this session; however, they also mentioned that the internet problems disturbed the flow of the session; whereas, LA-SA and LA-SY stated that background sounds interrupted their learning: "Although the feature of muting the microphone was clear in Skype, some students left their microphones open and this was disturbing for me personally, I could not hear clearly" (LA-SA). When it comes to future improvements, all participants mentioned that preparing in advance was what they planned to

do for the next session, and this is similar to what the peer facilitator (LA-SK) indicated in that "preparing lessons' summaries and being more specific" were the things to do differently next session. However, LA-SL added that LA-SK needed to act quickly when students deviated from the topic explaining that: "the session was a bit messy, I hope that the peer facilitator acts quickly next time and stops the side talk because most of us do not have time to waste".

7.2 Session 2: Collective labour disputes in public institutions and administrations

The second session was conducted on Saturday, August 17, 2019, at 9 p.m. and lasted for one hour and 28 minutes. Nine participants attended this session (LA-SS, LA-SK, LA-SY, LA-SL, LA-SF, LA-SA, LA-SG, LA-SR, and LA-SJ) and among them was LA-SJ who was the new member working in administration and living in the northwest of the country. Four participants, including the peer facilitator, (LA-SK, LA-SS, LA-SA, and LA-SL) were the first comers who started talking about how bad the internet was in many parts of the country while others were joining the discussion sequentially until the number of participants reached six in total, and then LA-SK started the session with greeting the members and reminding them of the importance of using the muting feature of the microphone to clearly hear each other without having any disturbing background noise. However, the latecomers (LA-SG, LA-SF, and LA-SJ) did not capture this notice and left their microphones open which resulted in some noisy instances and pauses in the discussion.

7.2.1 Design and content of session two

Following the greetings, LA-SK directly opened the discussion with the following question: "What is the difference between individual and collective labour disputes in the public and private sectors?" and then, he gave background information that steered the discussion into exploring this question stressing on how administrative decrees are applied in real-life situations and using individual experiences in the administrative workplace as illustrative examples. This content that was designated for this session was related to the module of "collective labour disputes in public institutions and administrations" which was already scheduled for revision in this session. After working through the first question, LA-SK encouraged the group to share what other things they found unclear when revising the module individually and from there, the rest of the session was built on the attempt to work out through the questions asked by LA-SY, LA-SA, and LA-SR, and then the session was concluded by LA-SK who provided a brief summary of what was discussed and reminded his peers of the module that they would revise for the next session and closed the discussion afterwards.

The communication was verbal through the microphone; however, none of the members used the webcam except for LA-SK. For example, for LA-SJ, attending the session was her first experience and she made it clear in the initial interview that she won't use the webcam for personal reasons and the researcher assured that her choice would be respected. On the other hand, although the frequency of the contribution varied, all participants contributed to the discussion in one way or another; however, LA-SJ and LA-SR had an interrupted participation due to the weak internet connectivity causing them to leave and re-join the session multiple times. The internet issue also made LA-SC unable to attend the session as he sent the researcher a message, a day after the session, explaining that he could not attend because of a sudden cut off of the internet.

7.2.2 Interactions in session two

The level of interaction in this session was higher than the previous one mainly because of the nature and complexity of the topic in that participants' contributions seemed to be largely a matter of checking understanding of the information they had, and this was further evidenced by the mix of student-student, student-peer facilitator, and student-content interactions. While waiting for the rest of the members to join the discussion, social interaction was initiated between LA-SK, LA-SS, LA-SA, and LA-SL about the problem of internet connection and which was directed to the whole group (student-to-group interaction). Peer facilitator-to-group interaction was needed for moving the discussion forward, guiding students by asking the main question that steered the discussion, encouraging participation, and acknowledging students' contributions at the end of the session which indicates that the interaction was mostly content-driven.

With the group's members benefiting from each other's elaborations, instances of student-to-peer facilitator and peer facilitator-to-student interactions were also marked when LA-SA, for example, wanted to confirm her understanding by asking LA-SK to explain the steps of dealing with individual labour disputes based on his working experience; similarly, other student-to-student interactions appeared in the form of comments directed to a particular individual as reflecting on individual experiences in the workplace and connecting them with the topic of discussion at hand brought students more closely to each other and they started calling each other by their names. This also enhanced the interaction as more participants (LA-SS and LA-SF in particular) started joining the discussion especially if the question or answer was more about real-life situations such as when LA-SF related to his administrative experience (student-to-group interaction) and was giving some hands-on practice in dealing with individual labour

disputes in reality versus how it was explained in the course and this, in return, made participants interact with the content as a group by expressing their opinions verbally using the microphone since visual cues were absent in that no one used his webcam except for LA-SK. Generally, all participants contributed throughout the session except for LA-SJ, LA-SG, and LA-SF who contributed only towards the end of the discussion.

This session was closed with a more social atmosphere which marked the end of the content-driven discussion, particularly when LA-SA wanted the discussion to last longer: "I really liked today's discussion and I am willing to stay for more time" and LA-SY joked about having the discussion dominated by females adding that: "We tackled a lot of aspects that were absent from our minds and we were enlightened and talking about myself, I was enlightened about many aspects that I used to ignore ". These positive remarks revealed how satisfied the students were with the session and how they felt more at ease than in the previous one to interrupt and clarify points of difficulty, particularly by providing examples of practice based on real-life experiences.

7.2.3 CoI in session two

As discussed previously in Section (7.2), Session 2 was attended by nine participants and lasted for one hour and 28 minutes. The topic for discussion was a general revision of the module of "collective labour disputes in public institutions and administrations" through which 121 comments were identified.

As this session was the second Skype meeting that students had, facilitation from the peer facilitator was necessary not only to steer the discussion but also to expand it and this was evidenced by the high level of involvement by the peer facilitator ($n=24$, 20%). However, the proportion of the comments contributed by LA-SA ($n=33$, 27%; Table 7.3) was the highest. The participation of the other participants marked disparity with LA-SR and LA-SY having similar number of contributions ($n=17$, 14%), followed by LA-SL ($n=13$, 11 %), LA-SS ($n=6$, 5 %), LA-SF ($n=5$, 4 %), and LA-SJ ($n=4$, 3%). It is also worth mentioning that LA-SG joined after 20 minutes from the beginning of the discussion and this might explain his low contribution compared to his peers ($n=2$, 2%). On the other hand, although the contribution of LA-SJ and LA-SR was interrupted by the unstable internet connection, they stayed throughout the session and chose to continue contributing to the discussion.

The nature of the interaction and the participants' contributions within this emerging community were also viewed from the CoI standpoint. Again, this framework was used to code each of the

121comments made in this session as one of social presence, teaching presence, and cognitive presence (Table 7.3). Cognitive presence, principally by LA-SA, dominated the discussion (n=61, 51%) over the two other presences mainly because of the students' engagement in the process of understanding the nature of the problem then exploring relevant information within the online community and offering possible explanations that led to the creation of solutions. However, cognitive presence in this session was not as high as in the first session (n=66, 56%; Table 7.2).

Table 7.3 Number of comments as per participant and presence in Session 2 (N=121)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
LA-SK (PF)	11	9	4	24 (20 %)
LA-SS	0	2	4	6 (5 %)
LA-SY	3	3	11	17 (14%)
LA-SL	1	3	9	13 (11 %)
LA-SF	0	2	3	5 (4 %)
LA-SA	5	12	16	33 (27 %)
LA-SG	0	2	0	2 (2 %)
LA-SR	2	3	12	17 (14%)
LA-SJ	0	2	2	4 (3 %)
Total	22 (18 %)	38 (31 %)	61 (51 %)	121 (100%)

Additionally, Session 2 had a relatively high level of students' social involvement, as evidenced by the proportion of comments representing social presence (n=38, 31%) and which was almost similar to the social presence in Session 1 (n=37, 32%; Table 7.2). The role of social presence in this session was very important for the development of the online community. As previously mentioned (Section 7.2.2), the occurrence of social presence was marked at the beginning in the form of salutations and social sharing and at the end in the form of farewells and social sharing as well. The relatively high incidence of social presence that occurred throughout the session

was consistent with the content discussion as it included more expressions of appreciation for facilitating understanding and complimenting others' answers alongside instances of sharing information unrelated to the topic or presenting details of personal life such as talking about how the bad weather had to do with the weak internet connection.

Although marking an increase compared with the previous session (n=14, 12%; Table 7.2), teaching presence (n=22, 18%) played a minor part in this session but had a significant role in promoting cognitive engagement of participants and was performed by both the peer facilitator, LA-SK, and students. In fact, LA-SK's teaching presence (n=11, 9%) balanced the teaching presence amongst the students (n=11, 9%) and that was principally associated with LA-SA, LA-SY, LA-SR, and LA-SL (n=5, 4%; n=3, 2%; n=2, 2%; n=1, 1% respectively). While LA-SK's teaching presence was in the form of facilitating the discourse in terms of presenting background information of the discussion topic, setting the climate for learning, and refocusing discussion or supplying clarifying information, students' teaching presence was more related to presenting follow-up topics and keeping their peers on the topic as well as offering useful illustrations, and making explicit reference to outside materials.

7.2.4 Students' reflections on session two

Participants were asked after the second session to complete the same reflective log which includes questions about their perceptions of this session (Session 2). Eight participants (LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, LA-SR, and LA-SJ) out of the nine participants who attended this session returned their reflective logs. The answers of these eight participants indicated being comfortable with the Skype PL environment. For example, LA-SR commented that: "I felt comfortable and engaged in this session because the members were friendly, unlike the previous one in which I felt confused because it was my first experience". Alongside sensing progress in the level of social engagement, participants also sensed progress in their understanding of the content and mentioned that they attended to gain information and revise the module scheduled for this session (LA-SL, LA-SY, and LA-SR), to avail of the working experience of other members (LA-SG), and to ask for clarification about incomprehensible points (LA-SS and LA-SA). Participants also commented positively on the effects of the Skype PL on the development of a learning community sensing a satisfying progress as noted by LA-SK: "We were able to form an academic scientific community" and LA-SA mentioned that this was achieved "even with a small group". Similar to the previous session, participants used terms such as "positive" (LA-SS, LA-SY, and LA-SL) and "good" (LA-SK) to describe their interactions with each other and with the content; however, the weak internet was still a major

issue causing problems in the ability to hear others' contributions (LA-SA). Another incident that captured the attention of LA-SS was leaving the microphone open "even when not participating" explaining that she felt that some members were not taking these sessions seriously. Overall, students felt they achieved a common understanding and described their satisfaction with this session indicating that they were willing to attend the next session with plans to improve it such as: "reviewing the topic in advance" (LA-SR) and "preparing more evidence to support my information" (LA-SK).

7.3 Session 3: Disciplinary system for public employees

The third session, Session 3, was conducted on Saturday 24 August at 9 p.m. and lasted for one hour and 20 minutes. This session witnessed high attendance as ten participants attended (LA-SS, LA-SK, LA-SY, LA-SL, LA-SF, LA-SC, LA-SA, LA-SG, LA-SR, and LA-SJ). However, two participants (LA-SJ and LA-SC) attended only for a short period and then left because of problems with the internet connection. Except for the internet connectivity which remained a major difficulty, most participants seemed comfortable with both the PL environment and the Skype technology. LA-SS, LA-SK, LA-SL, and LA-SA were the first who joined the session and then were followed by others briefly.

7.3.1 Design and content of session three

This session started with the usual greetings and debriefing about what was covered in the previous session as well as taking the opportunity to explain how to mute the microphone and to click on the icon again when wanting to talk. LA-SK also informed his peers that his internet was not stable and asked them to tell him if his voice was not clear; also, LA-SL interfered to add that she did not have someone to help her in looking after her children and apologised in advance for any background noise when using the microphone: "…I do not want to disrupt you or make you hear outside noises, so please accept my apologies for any unprecedented interruption".

From there, the discussion moved to focus on the challenging aspects students faced when revising the module of "disciplinary system for public employees" and that was already scheduled for this session. In this regard, LA-SK stated: "we will try to remind each other of the most important things related to this module and especially the one that raises controversy"; this was followed by an introduction about the disciplinary system to arrive at the main question that steered the discussion:

The disciplinary system is a legislative system and has special authority and this could be seen as a guarantee to discipline the worker and this disciplinary system has various ramifications and we will try to talk about them. So, do you think that the Algerian legislator did no wrong in assigning this task to the appointing authority? (LA-SK)

The content of this session was very intense which included asking many questions that stemmed from the discussion and seeking clarifications about the key terminologies and decrees related to the module. However, working through these questions allowed students to reinforce and clarify their understanding.

This discussion started at a normal pace until the members experienced troubleshooting with audio which caused them to talk over each other or not listen to each other's interventions. This was explained by LA-SK as it was likely to be related to the total number of participants which reached nine; yet, as it was noted previously, LA-SJ left the session very soon after about 5 minutes of her attendance followed by LA-SC who left the group in the middle of the discussion. Two other students (LA-SF and LA-SG) were exiting and re-entering the discussion stating that they could not hear properly and that they also experienced sound issues.

Similar to the previous sessions, this session lasted longer than the agreed time and it was only when participants felt they reached a common understanding that they decided to close the discussion. Again, the last minutes of the session were about organisation matters such as confirming the timing and the module that would be dealt with in the next session and finished with usual expressions of appreciation and farewells. About 30 minutes after the discussion was closed, LA-SJ sent a message on the chat box of the Skype group apologising for leaving the session due to a sudden capture of electricity; however, when the researcher contacted LA-SC about the reason for his absence, he explained that the internet connection was too weak and could not re-join the discussion because of it.

7.3.2 Interactions in session three

The interaction in the third session was at its highest point and included a mix of peer facilitator-to-content and student-to-content interactions in the form of presenting the content and breaking down the initial question, analysing, and studying the topic being discussed; peer facilitator-to-group interaction in the form of opening the discussion, laying down the problem statement, and encouraging participation; student-to-group interaction in the form of contributing ideas, asking and answering questions; and student-to-student interaction in responding directly to an individual to clarify ambiguities, or to correct misunderstandings.

In the first few minutes of the session, students started with a social interaction about the slow internet connection that most cities in Algeria were experiencing and the possibility of having a sporadic discussion because of it. This conversation continued even in the opening of the discussion when LA-SK apologised in advance for his internet which led to a self-disclosure on the part of LA-SL who also apologised for the sound of her children in the background when turning on the microphone. However, after introducing the topic, social interaction did not go beyond expressions of appreciation, talking about sound issues, internet connection, and farewell at the end of the session as students showed heavy concentration on the content. Although comments from the peer facilitator as well as from participants were directed to the whole group, student-to-student interaction was high in this session as participants got used to each other in that they were asking direct questions to particular individuals such as when LA-SS asked LA-SR for illustrations and examples given that her professional area was related to the disciplinary system for public employees:

LA-SS: Since LA-SR is a member of the committee, she might have faced this case. If she is hearing me, can you please illustrate what the employer can do in this case?

LA-SR: Yes, thank you, this is a good question. Thank you for bringing it up…

The complexity of the content which required a view of experience was the triggering event that made LA-SR take the lead from there and show a high level of direct instruction which was necessary at that point to fill gaps in the participants' understanding of practicalities, even though the content was already covered in their DL programme, and this was managed by providing examples to make the content more comprehensible and showing an advance understanding through the exhibition of the processes illustrated with related decrees and their date of issue. Meanwhile, the other participants also contributed to the discussion by asking questions and offering additional explanations to each other (student-to-group and student-to-student interactions).

LA-SK, on the other hand, continued to facilitate the discussion by using encouraging phrases such as "that is a good idea", and "you explained it better than me" as well as stepping back and leaving space for the other members to express ideas and present follow-up topics. Thus, students felt more comfortable agreeing and disagreeing and calling each other by their names. It was only till the end of the session that social interaction came to the scene again when students expressed appreciation to LA-SK for his efforts (student-to-peer facilitator interaction) and how the explanation of LA-SR was valuable (student-to-student interaction). After that, LA-SK reminded the students of the module to be discussed in the next session and closed the

discussion by saying: "thank you for your efforts and I wish the internet will help in the coming sessions".

Again, no one in the group used the webcam, except for LA-SK and all participants used the microphone and contributed to the discussion except for LA-SJ and LA-SC who were not able to attend the whole session as it was noted earlier.

7.3.3 CoI in session three

With ten students in attendance, Session 3 was about the "disciplinary system for public employees" and lasted for one hour and 20 minutes. In this session, the total number of students' contributions reached 167 comments.

Session 3 had a relatively high level of students' contribution compared to the previous session, Session 2, and there had been varied levels of participants' contributions with the highest proportion of comments contributed by the peer facilitator, LA-SK (n=31, 19%) followed by LA-SS (n=30, 18%), LA-SR (n=27, 16%), LA-SG (n=24, 14%), LA-SY (n=19, 11%), LA-SL (n=14, 8%), LA-SA (n=13, 8%), and LA-SF (n=9, 5%). This demonstrates a more evenly distributed participation than previously. As indicated in Section (7.3.1), two participants (LA-SC and LA-SJ) left the session after only a short period of time which explains why they were relatively quiet and did not contribute at all. However, it should be noted that LA-SG's level of involvement in this session (n=24, 14%) increased significantly compared with Session 1 (n=0, 0%; Table 7.2) and Session 2 (n=2, 2 %; Table 7.3).

The CoI framework was also used to code the contributions of this group in terms of the three presences (Table 7.4). Referring to all the students' comments, cognitive presence marked the highest number of occurrences in this session (n=82, 49%) as it was facilitated by teaching presence (n=52, 31%) which, on the other hand, marked a noticeable increase compared to the previous sessions unlike the cognitive presence which decreased (Tables 7.2 and 7.3).

In this session, facilitating the discussion and providing direct instructions was not only on the part of the peer facilitator, LA-SK (n=22, 13%) but also on the part of all students who contributed in varying degrees to teaching presence except for LA-SJ and LA-SC. For example, LA-SR contributed the most to teaching presence after the first 30 minutes of the discussion (n=19, 11%) especially in correcting misconceptions of some of her peers given that the emerging topics of discussion were related to her professional experience.

Table 7.4 Number of comments as per participant and presence in Session 3 (*N*=167)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
LA-SK (PF)	22	5	4	31 (19%)
LA-SS	1	6	23	30 (18%)
LA-SY	2	3	14	19 (11%)
LA-SL	2	6	6	14 (8%)
LA-SF	2	0	7	9 (5%)
LA-SC	0	0	0	0 (0%)
LA-SA	3	2	8	13 (8%)
LA-SG	1	9	14	24 (14%)
LA-SR	19	2	6	27 (16%)
LA-SJ	0	0	0	0 (0 %)
Total	52 (31%)	33 (20%)	82 (49%)	167 (100%)

Social presence in this session significantly decreased (*n*=33, 20%; Table 7.4) compared with Sessions 1 and 2 (*n*=37, 32%; *n*=38, 31% respectively) due to the heavy concentration on confirming understanding and overcoming misconceptions. Social sharing took place at the very beginning of the session when LA-SL, for instance, was apologising for the sound in the background when she turned on her microphone to speak and apart from the greetings and farewells, social discussions in between served to reduce the pressure of maintaining a high degree of cognitive load and were provoked by problems of talking at the same time or difficulty in hearing the conversation clearly due to the weak internet connection. Other instances of social presence also included expressing appreciation shown between peers for answering questions and clarifying misconceptions.

7.3.4 Students' reflections on session three

Seven reflective logs were sent back to the researcher via email (LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, and LA-SR) out of ten participants who attended this session. These logs indicated that this session was rich both in content and interaction as LA-SA mentioned being enriched with the practical aspect of the module and LA-SR felt no longer intimidated to express her thoughts. This also confirms the positive effects of the Skype PL environment on the development of the learning community as LA-SK commented that: "This Skype method contributed to the convergence of views and created a simple but constructive social and academic relationship between the members".

All participants commented on the understanding of the content and gaining new information as the main outcomes of this session. However, for LA-SK, gaining experience in how to facilitate the session by "evoking information and organising the discussion" was the most important outcome of this session. What made students satisfied with this session was the collective contribution to understanding (LA-SS and LA-SL) as well as how LA-SK and LA-SR were sharing practical knowledge from their working experience (LA-SL and LA-SG) and the instant responses received as was mentioned by LA-SS: "My peers were responding to my questions quickly and this helped me understand better". However, problems with the internet connection (LA-SY and LA-SR), sound issues (LA-SL), background noise (LA-SK), and talking over each other (LA-SS, LA-SA, and LA-SR) were the main challenges experienced in this session and were also addressed by LA-SK as areas that need improvement for the next session adding that: "In this session, I did not pay attention to one of my peers who wanted to intervene until LA-SS told me so, I will try to be careful next session". Other participants (LA-SL and LA-SA) mentioned the importance of preparation before coming to the session whereas, LA-SR indicated that: "The peer facilitator should be careful in the next session about answering questions that are not related to the discussion topic".

7.4 Session 4: Special administrative labour disputes

The fourth session, Session 4, was conducted on Saturday, September 7, 2019, at 9 p.m. and lasted for about one hour and 15 minutes. The number of participants in this session was nine in total (LA-SS, LA-SK, LA-SY, LA-SL, LA-SF, LA-SA, LA-SG, LA-SR, and LA-SE). LA-SS, LA-SA, LA-SR, and LA-SK were the first to join the conversation and were followed by LA-SY, LA-SL, and LA-SF after only five minutes; and then LA-SG and LA-SE joined after a further 5 minutes. For LA-SE, this session was his first session in which he introduced himself stating that he worked in a private institution and lived in the east of Algeria; after that, LA-SK

welcomed him and the other members and told him briefly about the usual procedure and what would be discussed in this session. During the waiting period, students started talking about the protests and the political instability of the country and in order to move from this subject to the topic of the discussion, LA-SK joked about the "no way out" nature of this conversation.

7.4.1 Design and content of session four

This session was planned to revise challenging aspects of the "special administrative labour disputes" module that students decided on. Following the same usual procedure, LA-SK started the discussion with a background information about the module which paved the way to an open-ended question which was as follow:

> *So, to study this module we need first to start with a hint...so starting with the criteria for determining jurisdiction...What are the two criteria for determining jurisdiction and how do we distinguish the case that requires to be solved at the level of administrative justice from the case that requires to be solved at the level of ordinary justice?* (LA-SK)

From this, students moved on to discuss criteria of jurisdiction and to analyse decisions taken by administrative and ordinary justice to solve particular legal issues alongside discussing the correct use of discipline-related terminologies and trying to alleviate confusion around them such as emphasising the distinction between jurisdictive decisions and administrative decisions. In the course of discussing this content, students practised some inquiry-based learning strategies such as when LA-SK formed the main question that led students to present examples of cases and argue for or against them and in response to that, students started exchanging, building on, and evaluating their background understanding of the topic and even asking further questions to confirm or clarify understanding as LA-SY, for example, did: " I want to ask whether judgement is subject to an appeal or not, and I do not think it is subject to appeal because …, do you think I am wrong ?". These questions and associated discussions lasted roughly an hour. Everyone was engaged in the discussion and asked questions to help guide the conversation. The end of the discussion was about organisational matters such as the plan and timing of the following session and then final farewells.

7.4.2 Interactions in session four

The session started with social sharing and progressed to content discussion by working through the probing questions and discussing concepts and cases related to the field of administrative labour disputes. Thus, interacting with the content that was initially enhanced by LA-SK

allowed participants to share and evaluate their information about the defining roles of administrative and ordinary justice as well as tackling other discipline-related terminologies.

At the beginning of the session, LA-SK initiated social interaction by greeting and welcoming the first coming members (LA-SS, LA-SA, and LA-SR) and after LA-SY, LA-SL, and LA-SF joined, the discussion moved to the topic of protests which was first initiated by LA-SY and was then expanded to include the other attendees (student-to-group interaction). This was followed by peer facilitator-to-group interaction as LA-SK commented: "I know this topic has no end neither a way out but it's better to start now so that we can go to bed early tonight (Laughing)" and then, he directly introduced the topic of the discussion followed by an open-ended question that stimulated students' thinking.

Using the microphone to exchange ideas had a positive influence on the dynamics of the interaction taking place as everyone participated in student-to-content and student-to-group interaction that was mostly based on questioning and clarifying information which allowed for inquiry-based learning to take place and for the community to develop; for instance, when LA-SR and LA-SA disagreed with the answer of LA-SS and spotted a misunderstanding of a particular administrative decree, they did not hesitate to tell her that there was an error in her answer explaining why was so, and then LA-SS responded that she mixed up the decrees and thanked them for the correction. Although this interaction was student-to-student, using the microphone allowed everyone to benefit from these comments.

In addition, peer facilitator-to-group interaction was high in this session which could be identified as a mix of question/answer facilitation when LA-SK was asking probing questions as follow up topics, and direct instruction by explaining and illustrating areas where misconceptions could arise using evidence from articles he individually studied. However, another incident that was captured in this session was when LA-SK invited LA-SR to facilitate the discussion and answer LA-SG's question about the difference between private and public ownership stating that: "I think this is what LA-SR is more knowledgeable about, it should be better to be the facilitator because you are more knowledgeable about these aspects" and then, LA-SR answered: "I'm going to explain this particular point" and continued explaining with examples and mentioned a similar case that happened in her workplace. During this discussion, LA-SK also assisted understanding by referring to legal documents and their date of issue to help other students find them as well as constantly reflecting on his working experience and how the administrative protocols were managed in numerous cases. This also denotes progress in the skills of LA-SK who was acknowledging members' participation using their names and

encouraging participation as he stated: "It is a good opportunity to revise all together. Maybe there is an aspect that we were not aware of".

As much as the discussion was intense, the atmosphere was eased by the use of social comments beyond peer facilitator-to-student acknowledgement of contribution, such as LA-SA's self-disclosure when she stated: "It is only the first part of the module that I really understood but for the rest, I' m completely lost (laughing)". There were instances of interactions that resembled more to a direct face-to-face interaction and could be said to be associated with a regular classroom atmosphere; for example, LA-SL responded to LA-SS after answering her question stating "Ah, now I get it, thank you for the clarification" or when LA-SG mixed definitions of two terminologies, LA-SY responded: "that's what I always thought as well but it's actually vice versa".

Students kept sharing authentic examples from the workplace relevant to the topic of discussion until LA-SA decided to leave the session, and the other participants agreed to do the same:

LA-SA: Allow me to leave now. Thank you for the benefits and for correcting some information that I did not know before.

LA-SY: Yes, it is a bit late and I agree we corrected our information about so many aspects.

LA-SK: Lastly, I really thank everyone who contributed with precious information and even those who did not participate, I hope they benefited from today's rich session and I really thank the researcher for gathering us. We were colleagues but now we came to know each other more and thank you so much.

Again, up to this student-to-group and peer facilitator-to-group interaction, no one used the webcam except for LA-SK and LA-SG who turned on his webcam after 25 minutes; whereas, LA-SF decided to turn it off shortly after about 15 minutes from joining the session.

7.4.3 CoI in session four

With nine participants attending for one hour and 15 minutes (Section 7.4), this session yielded 223 comments. This session marked a high-level of involvement on the part of LA-SK as evidenced by the proportion of comments he contributed to the discussion (n=74, 33%; Table 7.5) and which was even higher than all the previous sessions (Tables 7.2, 7.3, and 7.4). The remaining participants showed varying degrees of involvement with LA-SS and LA-SR contributing the most (n=35, 16% and n=34, 15% respectively), followed by LA-SY and LA-SG (n= 27, 12% and n=25, 11% respectively). As in the past, the level of involvement of LA-SA, LA-SL, and LA-SF remained the same (n=12, 5%; n=8, 4%; and n=5, 2% respectively)

except for LA-SE who was experiencing this environment for the first time and preferred to remain quite (*n*=3, 1%).

Table 7.5 Number of comments as per participant and presence in Session 4 (*N*=223)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
LA-SK (PF)	52	9	13	74 (33%)
LA-SS	1	5	29	35 (16%)
LA-SY	0	6	21	27 (12%)
LA-SL	0	1	7	8 (4%)
LA-SF	0	2	3	5 (2%)
LA-SA	0	3	9	12 (5%)
LA-SG	2	2	21	25 (11%)
LA-SR	17	1	16	34 (15%)
LA-SE	0	1	2	3 (1%)
Total	72 (32%)	30 (13%)	121 (54%)	223 (100%)

From the coding of the comments into the three CoI presences (Table 7.5), it can be noticed that cognitive presence again dominates (*n*=121, 54%) over teaching presence (*n*=72, 32%) and social presence (*n*=30, 13%). Cognitive presence marked an increase compared with Sessions 2 and 3, due to the higher proportion of sense of puzzlement, information exchange and synthesis required by the complexity and challenging nature of the content covered (Section 7.4). Teaching presence was also higher than all the previous sessions (Tables 7.2, 7.3, and 7.4) and was mostly associated with the peer facilitator, LA-SK, who performed direct instruction as he explicitly showed enthusiasm over the topic of the discussion given that it was related to his professional domain: "Given that I work in the field of public transactions, I can give you authentic examples of how this deal proceeded…" (LA-SK). LA-SR's teaching presence occurred not only when invited by LA-SK to offer useful illustrations but also each time the discussion touched upon authentic administrative cases as she was continuously exhibiting related processes to make the content more comprehensible. However, LA-SG's and LA-SS's teaching presence was in the form of presenting follow up topics.

Social presence in this session was less than in the previous sessions, as the discussion of the content took over social interaction. Nevertheless, social presence was not only restricted to the salutations at the beginning and goodbyes at the end of the session; rather, it was mostly stimulated by sounds in the background and technical issues in hearing caused by the weak internet connection, social sharing, expressing appreciation and support amongst peers as well as reflecting on the discussion by LA-SA and LA-SY as being a good opportunity to correct some information and develop understanding about many aspects.

7.4.4 Students' reflections on session four

In session four, seven participants (LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, and LA-SR) out of nine who attended the session returned their reflective logs via email. These students described communicating with peers via Skype as a valuable experience and that they were motivated to attend the next session indicating that it helped them to alleviate confusion (LA-SL and LA-SY) and also to reinforce their understanding: "I was asking things that I was not 100 % sure about" (LA-SA). However, LA-SS expressed her uncertainty about the explanations provided and mentioned that: "Some aspects should be better explained by a teacher" denoting that she did not agree with her peers about reaching a common conclusion. On the other hand, sensing the development of a community of learning was clear in the students' answers mentioning additions to their learning and reinforcement of their social relationships. Alongside being beneficial in terms of correcting misconceptions and erasing confusion (LA-SY, LA-SS, LA-SA, and LA-SL), other positive outcomes of this session included "skills in communicating and managing conversations" (LA-SR). Comments on interactions in this session were also positive except for LA-SS who mentioned that the peer facilitator was spending more time on one aspect than was necessary. Other challenges included the usual problem of internet connection and background noise (LA-SR and LA-SL); hence, two participants (LA-SS and LA-SG) suggested having the next session in the morning time to avoid problems of internet connection; whereas LA-SY and LA-SK mentioned working on time management and organisation aspects of the discussion as areas that needed improvement.

7.5 Session 5: Administrative control in the field of public health and the environment

The fifth session, Session 5, was conducted on the 14th of September, Saturday at 9 p.m. and was longer than the previous sessions lasting for one hour and 40 minutes. Eight participants attended the session (LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, LA-SR, and LA-SE). Three participants, (LA-SS, LA-SA, and LA-SL) joined first and within 10 minutes, the remaining participants, (LA-SK, LA-SG, LA-SY, LA-SR, and LA-SE), arrived in quick

succession. However, LA-SE decided to leave the session after 20 minutes from joining whereas, LA-SG had sound issues and left after 35 minutes.

7.5.1 Design and content of session five

During the waiting period, students talked about the possibility that the teachers involved in their DL programme were planning to strike because they were not paid. Following the greetings, LA-SK started directly introducing the topic related to the module already designated for the session as follow:

> *Considering that the right to a clean, safe and sustainable environment must be guaranteed, there were amendments to the constitution by the international community in 2016 stating the importance of protecting the environment and public safety. Does the absence of an explicit legal provision on environmental protection mean the Algerian law did not include explicit legal provisions on environmental protection? It was only in 2016 when it was adopted in the decree 16/01. So, what do you think?* (LA-SK)

This question paved the way for a deep discussion of related decrees and how they were updated through time alongside identifying the use of these decrees, and comparing the efforts exerted by the Algerian government in the field of protecting the environment and public safety with those of other eastern and western contexts. Again, students applied the triggering inquiry strategy throughout this content discussion by asking further open-ended questions about aspects they were interested to know and shared their views even when they were unsure of the answer which made the discussion last for more than one hour that was initially agreed on and because it was a long discussion, LA-SK wrapped up the session quickly by concluding with reminders of the topic of the next session and making the usual farewells.

7.5.2 Interactions in session five

Before the discussion began, this session was initiated by student-to group interaction in the form of social sharing that LA-SA provoked by bringing up the subject of the unpaid teachers and the possibility of their strike. After that, progressing to the content discussion was facilitated by LA-SK who presented the statement of the problem and encouraged students' interaction with the content and with each other. Hence, student-to-group and student-to-student interaction was dominated mostly by LA-SR, LA-SY, LA-SA, and LA-SS followed by peer facilitator-to-group interaction that was mainly in the form of providing useful illustrations and refocusing the discussion.

Student-to-peer facilitator and student-to-student interaction also appeared in the form of confirming understanding of the content as participants were asking the peer facilitator or other peers to clarify the points that they found hard to assimilate such as when LA-SS asked LA-SK to provide further clarification of the administration's role in contributing to the protection of the environment and then, LA-SK responded with an example of how preventive treatments can play a role in avoiding pollution through the intervention of the department of administrative control, or to elaborate on some of the points that they were unfamiliar with such as when LA-SR mentioned the environmental law 03/010 and LA-SA stated: "This is the first time I'm hearing about this, can you state more what it is about?". With the lack of visual cues, it was hard to get non-verbal information that could indicate the level of understanding given that only LA-SK was using the webcam during this session, and participants interacted with the content and with their peers by discussing answers to specific questions and expressing their views verbally using the microphone.

Both personal interaction and content discussion were merged in several instances given the nature of the issues discussed that were mainly about environmental matters from an administrative perspective as students were giving numerous examples about environmental issues and how they were dealt with in terms of types and processes of punishments. This personal interaction was also reflected on by students, for example when LA-SY mentioned that: "Discussing these issues was fruitful and yielded a bulk of suggestions and it is an amazing experience for me because I took so many points about the theoretical aspects like the legislative acts … and each peer was giving his own experience".

Compared to the previous session, this session had more social interaction as it lasted for one hour and 40 minutes which is longer than it was initially agreed on and students were free to discuss as long as they wanted until they felt that they came to a solution or an agreed view about the topic being discussed. Thus, the discussion was concluded quickly with a note on the module to deal with in the next session followed by a thank you and goodbye.

7.5.3 CoI in session Five

The fifth session of this group was by far the longest session lasting one hour and 40 minutes and attended by eight participants, LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, LA-SR, and LA-SE (see Section 7.5). 170 comments were identified in this session which resulted from discussing the topic of administrative control in the field of public health and the environment. There was an almost balanced distribution of participation than in the previous sessions by the following three participants: LA-SY (n=41, 24%), LA-SK (n=39, 23%), and LA-SR (n=39,

23%). On the other hand, this session had a low level of peer facilitator involvement as demonstrated by the proportion of comments contributed by LA-SK (n=39, 23%) compared with the one of the previous session (n=74, 33%; Table 7.5), while the remaining members of the group contributed to varying degrees with LA-SA (n=24, 14%) contributing more than the previous session (n=12, 5%; Table 7.5) and LA-SS (n=10, 6%) showing a decreased level of contribution as compared to the previous session (n=35, 16%; Table 7.5). The contribution of LA-SL (n=8, 5%) was also low despite her early entrance and full attendance at the session (see Section 7.5) but chose not to take part in the discussion and did not show any progress compared to the previous session (n=8, 4%; Table 7.5). It is worth noting however that LA-SE also did not contribute much (n=5, 3%) as he decided to leave after 20 minutes from the beginning of the session and was followed by LA-SG who also attended for only 35 minutes and had ongoing sound issues which could explain his low contribution (n=4, 2%) although showing progress in Sessions 3 and 4 (n=24, 14%; n=25, 11% respectively).

The CoI coding of all the participants' contributions to this session into the three presences (Table 7.6) revealed that cognitive presence (n=94, 55%) again was higher than social presence (n=50, 30%) and teaching presence (n=26, 15%). Cognitive presence in this session was only 1% higher than that of the previous fourth session (n=54%) due to the same triggering inquiry strategy that participants used to learn more about the topic being discussed. Teaching presence, on the other hand, showed a significant decrease compared to that of the previous session due to the low level of contributions indicating direct instruction as the discussion was first prompted by the peer facilitator who played a role in setting the topic of discussion by presenting the statement of the problem (see Section 7.5.1) and then, chose to interfere only to refocus the discussion and supply clarifying information with reference to outside material and working experience and the same was done by LA-SR; whereas, LA-SA's contribution to teaching presence (n=3, 2%) was identified in her few attempts to refocus the discussion as well as contributing to the organisation of the learning experience related to establishing netiquette when she asked her peers to not talk over each other: "Can we please be more organised and talk one at a time". Other than that, participants showed high cognitive engagement and intervened without any invitation on the part of the peer facilitator.

It can be noted that social presence (n=50, 30%; Table 7.6) at the beginning of the session went beyond the usual greetings as a social sharing was initiated by LA-SA, and appeared again throughout the session taking a more focussed form of self-disclosure, expressing emotions regarding environmental issues, and also again at the end in the form of appreciating efforts and reflections on the topic of the discussion followed by usual farewells. Having more instances of

social presence in this session compared to the previous one (*n*=30, 13%; Table 7.5) could be explained by the length of the session which was about one hour and 40 minutes which made it the longest session participants had so far. Also, it should be acknowledged that the lack of visual cues was seen as an inconvenience in this session in that it was hard to indicate the level of understanding and comfort as well in this lengthy session given that only LA-SK used the webcam. Additionally, all participants relied on the microphone to communicate verbally and this seemed to be adequate with respect to the length and complexity of comments that participants were making, as evidenced by the lengthy text of the question made by LA-SK in an attempt to clarify his point and give a context to the question (see Section 7.5).

Table 7.6 Number of comments as per participant and presence in Session 5 (*N*=170)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
LA-SK (PF)	18	12	9	39 (23%)
LA-SS	0	4	6	10 (6%)
LA-SY	0	10	31	41 (24%)
LA-SL	0	3	5	8 (5%)
LA-SA	3	8	13	24 (14%)
LA-SG	0	1	3	4 (2%)
LA-SR	5	10	24	39 (23%)
LA-SE	0	2	3	5 (3%)
Total	26 (15%)	50 (30%)	94 (55%)	170 (100%)

7.5.4 Students' reflections on session five

All participants who attended this session returned their reflective log via email except for LA-SE. The comments of these participants indicated being used to the Skype learning environment

and its positive effects on the development of a learning community, mentioning how it brought them all together in one place (LA-SL), and facilitated their learning (LA-SS and LA-SA). Participants also indicated that collaboration (LA-SK), clarifying points found challenging when revised alone (LA-SY, LA-SS and LA-SR), learning new decrees (LA-SA) and the process of their application in real-life situations (LA-SG) were the most important gains from this session. Participants also confirmed that they reached a common conclusion by the end of the session; however, LA-SS had a different view mentioning that she did not agree with some aspects that were explained and that she could not intervene because the discussion was intense. This goes in line with her comment on the interactions in this session being "average"; whereas all participants described their interactions with peers and content as "good" (LA-SK and LA-SL) and "fruitful" (LA-SA). Alongside the weak internet connection and sound issues (LA-SR and LA-SG), other challenges encountered in this session included the length of the discussion (LA-SL), and the absence of a teacher to evaluate answers (LA-SS). Overall, most participants were satisfied with this session as LA-SK and LA-SY sensed an increase in the level of performance and contribution, whereas others indicated further areas of improvement such as time management (LA-SL) and rethinking the credibility of the answers (LA-SS).

7.6 Session 6: Public transactions

The sixth session, Session 6, was the last one and had to be delayed under the members' request due to their hectic schedule from Saturday, 21 September till the following weekend, the 28th of September at 9 p.m. This session was also long, lasting one hour and 25 minutes. The same eight participants attended this session (LA-SS, LA-SK, LA-SY, LA-SL, LA-SA, LA-SG, LA-SR, and LA-SE) and, again, the researcher did not anticipate apologies for non-attendance because this was the last session, and it was expected that not all participants were able to attend. Three participants (LA-SA, LA-SS, and LA-SR) joined the session when it first started and then were followed by the remaining participants (LA-SK, LA-SY, LA-SL, LA-SG, and LA-SE) after about 10 minutes.

7.6.1 Design and content of session six

The first comers greeted each other, and LA-SR expressed her wishes to have similar revision sessions in the future, whereas LA-SA responded:

> *To be honest, I personally decided to attend these sessions but I had little hope*
> *that we will focus on the revision for the exams. However, God bless everyone,*
> *I really took away so many things that will help me even in my work* (LA-SA)

The module that was decided on previously for this session was "public transactions" and once everyone settled, the peer facilitator, LA-SK, started the discussion by giving an outline of what would be covered in the session mentioning the following:

> *First, we need to start discussing the public domain, then we will move to the process of making and executing public deals, then we will discuss the dimensions of these public deals, then we will conclude with public transaction disputes that we have covered in the special administrative disputes. All the members are welcome to discuss and let's start* (LA-SK)

This session did not follow the usual format that was based on open-ended questions and seemed to follow a more structured approach to cover key aspects of the module. Following that, LA-SK asked the participants to state the definition of the public transaction and the different actors involved in the process of the public transaction and from there, participants contributed by responding, and asking for clarification. Also, explaining procedures and clarifying concepts was not only left to LA-SK, as LA-SR, LA-SS, and LA-SA assisted understanding by contributing illustrations and examples. However, LA-SK played an active role in this session by presenting follow-up topics after finishing dealing with each question such as the mechanisms of making a public contract, the objective of the public transactions, and the legislative procedures.

Being another long session in the late evening, it came as no surprise that some students could not stay for the whole session. One student (LA-SL) left the discussion when students were discussing the legislative procedures for about 10 minutes and returned stating: "Can you please tell me what point you are discussing now, I went to check on my daughter"; whereas LA-SG left the session 20 minutes before the end of the session without returning. In the last 10 minutes of the session, participants reflected on the discussions being beneficial and enlightening, and wished to have similar opportunities in the future. Finally, the session was closed with good wishes and "thank you".

7.6.2 Interactions in session six

Student-to-group interaction, mostly coming from LA-SR, LA-SY, and LA-SA, and peer facilitator-to-group interaction dominated this session and were noticeably higher than in the previous sessions due to the nature of the subject discussed that was related to LA-SK's field of work who also explained that: "I already worked in this field, maybe I have a lot of information and if I start talking about details, I won't stop, pardon me if I'm dominating the discussion".

On the other hand, peer facilitator-to-group interaction was still necessary to lead participants step-by-step through the process by using a combination of recall and analytical questions to facilitating discourse and direct instruction through the provision of illustrations and additional explanations of complex procedures to reduce confusion or misconceptions. It is worth noting however that peer facilitator-to-group interactions were supported by visual cues as he and LA-SE were the only ones using the webcam.

Interaction with the content was also fostered by LA-SK who introduced the topics under discussion to his peers and invited them to analyse and review key concepts and processes and students, in return, interacted with the content by listening, analysing, and sharing their ideas. With this content that was described by LA-SR as "a rich combination of theory and practice", facilitating the discussion was also performed by other participants such as when LA-SA asked her peers to talk one at a time and LA-SY responded that both peers were not listening to each other because of their slow internet connection, or when LA-SR showed support to LA-SL who expressed concerns about her knowledge of some practicalities and presented follow up topics: "It's alright, we will work through it together, we already defined the public transactions, let's go to the process of making a contract and what are the conditions and challenges".

Student-to-student interaction was evident during the discussion when LA-SR explained the conditions of making a contract to LA-SY after the latter asked her to clarify her answer or when LA-SR acknowledged LA-SE's misconception about the Act related to the public transaction. Again, although this type of interaction was more overt in that participants identified the other by name, the use of the microphone made the comments directed to the whole group. Student-to-peer facilitator interaction also occurred in this session in the form of directing questions to LA-SK such as when LA-SE asked about the delivery notice or when LA-SA wanted to check her understanding and said to LA-SK: "This means that there is freedom in the selection, right?".

With intense concentration on the content, social comments were used to lighten the atmosphere which can be said to be similar to a side talk in a "real classroom" except that the use of the microphone made these comments heard by the whole group. Student-to-group social conversation took place at the very beginning of the session between the first-comers who were expressing their thoughts about the sessions, and also appeared occasionally across the session. Beyond the greetings and expressions of appreciation, some of the peer facilitator-to-group social interactions were made to encourage participation; for example, when LA-SK joked about his domination of the discussion: "Anyone has another example so you do not say that

this person is a monopolistic enterprise (laughing)", while others were in the form of social sharing; for example, when he explained the sound of music in his background that was coming from a wedding party in his neighbourhood which stimulated some student-to-group social conversations about wedding parties at home. Student-to-peer facilitator social interaction was in the form of expressing appreciation and complementing answers such as when LA-SY said to LA-SK: "Thank you, this is a simple and thorough explanation".

The last ten minutes of the session were basically about expressing appreciation and thanking LA-SK for his efforts after this latter decided to conclude the session stating that they covered most of the important aspects and added that: "If we studied this module following each Act we would not finish". Then, student-to-peer facilitator social interaction was initiated by LA-SA and LA-SY:

LA-SA: It's our pleasure to benefit from someone in the field who has experience in this extensive domain.

LA-SY: Thank you, God bless you, so grateful for what you did.

After that, the session was concluded with expressions of positive regard and best wishes for success in the exams.

7.6.3 CoI in session six

Eight participants attended this session that lasted for about one hour and 25 minutes (see Section 7.6). In this session, 200 comments were identified. Session 6 had a high degree of involvement on the part of the peer facilitator, LA-SK, as evidenced by the amount of comments (n=77, 38 %) he contributed to the discussion (see Table 7.7) and that was even higher than all the previous sessions (see Tables 7.2, 7.3, 7.4, 7.5, and 7.6). The remaining students contributed to varying degrees with LA-SR contributing the most (n=51, 26 %) and then followed by LA-SY and LA-SA (n=21, 11 % and n=16, 8 % respectively), and then LA-SS and LA-SE who had a similar number of contributions (n=11, 6 %) and the lowest proportion of comments was on the part of LA-SG and LA-SL who did not contribute as much as in the previous sessions (n=7, 4 % and n=6, 3 % respectively). In terms of participants' involvement, this session had a more varying distribution of participation compared with the past sessions.

According to the CoI coding of the comments into the three presences (Table 7.7), the cognitive presence (n=79, 40%) was almost balanced with the teaching presence (n= 78, 39%) and both dominated over the social presence (n=43, 21%). Cognitive presence decreased compared with

all the previous sessions as the content covered in this session was enhanced by recall and analytical types of questions and students were not spending too much time in the exploration phase.

Teaching presence, on the other hand, marked an increase compared to all the previous sessions (n=78, 39%) due to the higher level of direct instruction that was not only on the part of the peer facilitator but also on the part of LA-SR as both had professional knowledge and experience about the content covered which made students, especially LA-SA, LA-SY, and LA-SE take the opportunity to ask questions and get clarifications; whereas, LA-SS, LA-SY, and LA-SA's teaching presence was particularly related to the presentation of follow up topics, refocusing the discussion, and establishing netiquette.

Table 7.7 Number of comments as per participant and presence in Session 6 (N=200)

Participants	Teaching Presence	Social Presence	Cognitive Presence	Frequency (% of total)
LA-SK (PF)	58	13	6	77 (38 %)
LA-SS	2	2	7	11 (6 %)
LA-SY	1	9	11	21 (11 %)
LA-SL	0	1	5	6 (3 %)
LA-SA	3	4	9	16 (8 %)
LA-SG	0	2	5	7 (4 %)
LA-SR	14	11	26	51 (26 %)
LA-SE	0	1	10	11 (6 %)
Total	78 (39 %)	43(21%)	79 (40%)	200 (100%)

Social presence in this session (n=43, 21%) was lower than the social presence represented by students in the previous session (n=50, 30%; Table 7.6). In addition to salutations at the opening of the session and goodbyes at the end, instances of social conversations can denote that students were comfortable in the discussion as they were calling each other by their real names, joking about the high involvement of LA-SK: "I already worked in this field maybe I have a lot of

information and if I start talking I won't stop" (LA-SK), expressing value: "We surely will benefit from your experience" (LA-SR) as well as appreciating the efforts made by LA-SK: "It's our pleasure to benefit from someone in the field who has experience in this extensive domain" (LA-SA). Additionally, social sharing also stemmed from incidences such as LA-SK's background sound and talking at the same time as a consequence of the weak internet experienced by most students.

Similar to all the previous sessions, students were using the microphone as the main tool of communication however, it should be also acknowledged that nobody used his webcam, even students who were active in this session and the previous discussions preferred to use their microphone only, except for LA-SK and LA-SE who used his webcam only after a while from joining his peers; however, this did not affect the discussion by any means except for instances when two students were talking at the same time because of the weak internet connection.

7.6.4 Students' reflections on session six

All participants returned their logs except for LA-SE. The answers indicated that this session was intensive and interactions were "high" (LA-SY). In this regard, LA-SA commented: "It was active because most of us had knowledge about this field". The progress in the development of a learning community was also sensed by most participants as they acknowledged the positive effects of the Skype PL environment on their understanding of the content (LA-SY), facilitation of learning (LA-SA), and ease of communication (LA-SL and LA-SK). These benefits alongside "talking about aspects we did not pay attention to" (LA-SR) and "linking theory to practice" (LA-SK) were the most important things achieved in students' perception. However, LA-SL viewed this session as not effective as the previous ones stating that: "I personally was looking for aspects I did not know, not just reiterating what was mentioned in the lectures".

Conversely, LA-SK viewed that this session was engaging and wished it lasted longer. The satisfactory aspect that most students mentioned was the contribution of all the members (LA-SA) and the support provided by LA-SK and LA-SR (LA-SG). However, spending a long time discussing one aspect instead of moving forward (LA-SS) was found to be the most challenging issue in addition to technical problems of the internet (LA-SL and LA-SG) and organisational problems such as talking over each other (LA-SR, LA-SL, and LA-SA). Other than that, students commented that they reached a common conclusion and that Skype "made learning animated" (LA-SK).

7.7 Comparative Summary

This chapter presented findings from the examination of the online synchronous discussions of the Local Administration group. It explored the nature of the discourse, types of interaction, changes in the interaction dynamics and issues related to them and therefore addressing the third and fourth aims of the study related to the Local Administration discipline context (Section 1.2). The sessions' recordings helped the study of the nature and development of interactions amongst the participants and between the participants and the content discussed. Again, the use of a thick description analysis and the CoI framework supported by the students' reflective logs assisted in developing a better understanding of the interactions taking place and provided a further insight into how the formation of a peer-based online community that functioned in a Skype synchronous setting contributed to supporting the learning experience of the Algerian distance students in the Local Administration discipline context.

Findings showed that introducing the Skype synchronous sessions provided a space for students with similar interests not only to exchange experiences and information but also to deepen inquiry, analysis, critique, and discussion and therefore enhanced students' learning of the content related to the Local Administration discipline. It should be noted, however, that unlike the type of inquiry of the Applied Linguistics group that was guided by past examinations topics, the open-ended questions that shaped the nature of the discourse which included reflections on the working experiences, played a significant role in the promotion of the cognitive presence among students as well as the changes that were observed in the interactions of the participants as it did not take too long for the interaction within the Skype environment to establish although none of the participants in this group used the webcam except for LA-SK and LA-SE who used it occasionally. Thus, being motivated to participate alongside the nature of the topics discussed were the key to developing the online discussions.

Similar to the Applied Linguistics group, cognitive presence, in all the six sessions, was the most dominant of all the presences followed by a similar distribution of teaching presence and social presence (see Tables 7.2, 7.3, 7.4, 7.5, 7.6, and 7.7; Figure 7.1). Similar distribution of the three presences was noted in Sessions 1, 2, and 5 with approximately 55% cognitive presence, 30% social presence, and 15 % teaching presence. Sessions 3 and 4 also had similar distribution of the three presences with roughly 50% cognitive presence, 35% teaching presence, and 15% social presence. The high proportion of cognitive presence across Sessions 1, 2, and 5 could be explained by the number of stuck places and sense of puzzlement that participants were experiencing due the nature and the complexity of the topics discussed and

the open-ended type of questions that initiated the discussion. Teaching presence, on the other hand, was high in Sessions 3 and 4 due to the number of explanations and illustrations provided by LA-SK and LA-SR, in particular, given that the nature of the topics discussed was related to their working experience. The distribution of responsibility among peers for facilitating, directing, and organising the learning process also resulted in attenuating the peer facilitator's domination of the discussion that was prevailing in Sessions 1, 2, and 5, unlike the Applied Linguistics group in which teaching presence was dominantly performed by the peer facilitator (AL-SN).

Again, similar to the Applied Linguistics group, social presence of this group was situational and coincided with the occurrence of background noise and internet problems. It was also related to the nature and complexity of the content which could explain why it was mostly high in Sessions 1, 2, and 5 where the cognitive presence was also high (Figure 7.1).

The variation in presence distribution in Session 6 compared with the previous sessions whereby teaching presence almost balanced cognitive presence could be explained by the nature of the discussion that was initiated by a recall question and expanded by other concept checking questions as well as the increased number of explanations and illustration of processes provided mostly by the peer facilitator given his experience working in the field of public transactions.

Generally, most participants of this group appeared to have a good grasp of the purpose of these sessions as well as the role of the peer facilitator which are essential parts of introducing online PL. However, it is worth noting that although the sessions of this group had low visual cues due to not using the webcam, students did not perceive them as influencing the formation of their learning community as the Applied linguistics group did; rather, some students noted that the absence of validating answers from the teacher was diminishing the potential of these sessions to contribute to their learning. These findings are further enhanced by responses collected from initial and final interviews.

The following chapter presents a thorough cross-case analysis, discussion and implications drawn from the findings of both case studies.
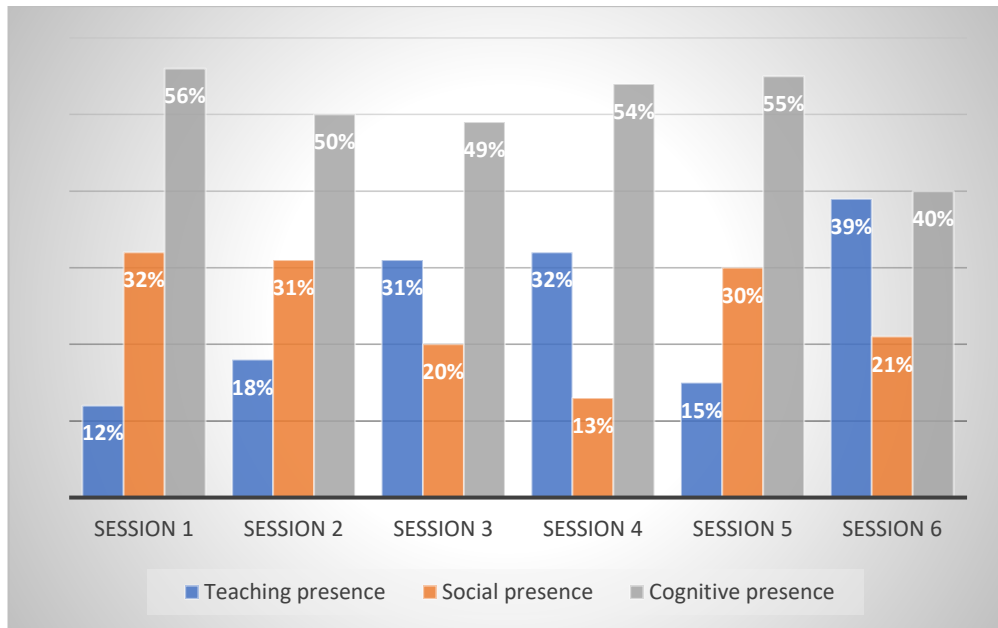
Figure 7.1 The distribution of the three CoI presences across six Skype PL sessions in the Local Administration discipline context

Chapter Eight: Conclusions

Introducing online synchronous PL via Skype to the Algerian distance learners studying in two discipline contexts: Applied Linguistics and Local Administration confirmed a sharing of responsibility for learning amongst the peer groups and creating a context for fostering meaningful interaction and collaboration; however, this practice was hampered by many challenges. This chapter is mainly about discussing the results of this research with reference to the aims of the study (Section 8.1). Moreover, the emerged theoretical and pedagogical implications from the findings will be looked into as well (Section 8.2), the limitations of this study are also described (Section 8.3), and then this thesis will conclude with proposing recommendations for future research (Section 8.4) and final reflections (Section 8.5).

8.1 Cross-Case Analysis, Discussion and Conclusions

The two cases in this research were examined by detailing the interactions among a community of learners that took place over the course of two months in a series of six online synchronous sessions. Hence, by investigating the practice of the online synchronous PL and its related processes and challenges in two masters' DL discipline contexts, this case study research is guided by the following overarching question: How does online synchronous PL contribute to the online DL experience of the Algerian master's students?

As previously indicated in Section (1.2), this study aims:

1. To describe the experience of interaction in the DL programme as perceived by students and teachers;

2. To investigate the students' readiness for the Skype peer learning discussions and what they introspect from this experience;

3. To describe the experience of interaction in the Skype peer learning sessions;

4. To examine the nature of the synchronous Skype peer-led discussions for two discipline contexts (Applied Linguistics and Local Administration);

5. To investigate the perception of students about the peer learning experience in a synchronous environment mediated by Skype; and,

6. To formulate a conceptual model pertaining to learning with peers in an online synchronous environment.

Accordingly, each of the aims of this study will be considered, in turn, to address the research question. Additionally, examining two cases provided a better understanding of the original

case by allowing for the investigation of similarities and differences between the two cases (Yin, 2009); hence, the cross-case analysis and the discussion of these findings will focus on six key themes: perceived learning and sense of community to address aims 1 and 2 (Section 8.1.1), affordances of the online synchronous environment (Section 8.1.2) and interactions of the peer groups to address aim 3 (Section 8.1.3), the nature of the conversation in the Skype PL sessions to address aim 4 (Section 8.1.4), students' perceptions of the value of the Skype PL sessions to address aim 5 (Section 8.1.5), and for aim 6, a model of online synchronous PL is proposed (Section 8.1.6).

8.1.1 Perceived learning and sense of community

Students described their interaction in the DL programme based on experience and habit, subject and purpose, teachers' and peers' effort expectancy, and social engagement. Students also indicated that the use of the DL online platform and social media for interaction affected their perceived learning and sense of community. Thus, the relationship between the students' learning and sense of community and the use of the online platform or another tool can also influence their interaction and engagement.

Considering that they were enrolled in a DL master's degree programme where the community experience of the classroom might be missed, one would expect to find that students were concerned more about the lack of audio-visual form of interaction as has been found in the study of Almendingen and his colleagues (2021) given its potential to reduce social, emotional, and physical distance (see Sections 3.3.2 and 3.4). However, the type of interaction, particularly student-teacher interaction was reported to be more important than the form of interaction. Although the written communication was ruling all the interactions and opportunities for experiencing audio-visual communication were missing, students stressed more on how the interactions on the online platform did not make a substantial contribution to their learning mainly because of the minimised student-teacher interaction and did not contribute to their sense of community as much as the student-initiated groups on social networks did. Selecting the form and type of interaction is therefore related to the desired outcomes of student-student, student-teacher, and student-content interactions which are perceived learning and a sense of community. For further evidence of to what extent audio-visual communication can contribute to their DL experience, most responses contained more indicators of a sense of community and learning which mattered to students more than the tool of communication.

When it comes to what students perceived as effective to their experience of learning at distance in terms of mode of interaction, it may appear from the students' comments that perceived

learning and a sense of community are equally important factors not only influencing the students' acceptance of the audio-visual interaction but also in regard to their readiness and interest in collaboration and learning with peers in a synchronous online environment mediated by Skype. As expected, the findings are consistent with the literature illustrating that the best predictor of perceived learning is a sense of community (Top, 2012), meaning that perceived learning and a sense of community are correlated (Baturay, 2011; Conrad, 2005; Dawson,2010; Dawson, 2006; Dawson, 2008; Poellhuber et al., 2013; Richardson & Swan, 2003; Rockinson-Szapkiw, 2012; Sher, 2009).

8.1.2 Affordances of the online synchronous environment

Although asynchronous technologies allow students to spend more time on the task by offering flexibility and time to deal with the material in that they can read, reflect, and construct knowledge before responding to questions, some of their limitations include the lack of immediacy, spontaneity, timely feedback, and reproduction of a "real" classroom to diminish the transactional distance (Bates, 2005). Therefore, it is important to develop a greater understanding of the affordances that a computer-mediated collaborative environment can provide to distance learners (see Section 3.3).

In this study, Skype was used as an interactive learning platform that has features of voice (using a microphone), webcam (video communication), and text chat, among others. Within this suggested online synchronous environment, the maturity of students, the PL strategy, the nature of the subject matter, and the combination of the audio and visual forms of communication determined the nature and extent of the interaction taking place (Moore & Kearsley, 1996; see Chapters 6 and 7).

Students reported that it was much easier to express thoughts and clarify meanings using voice rather than just typing. Even the use of the text chat was limited to only confirming the timing of the sessions, posting the topics of the discussions and sharing documents. All conversations during the online sessions were initiated using voice except for very few chat instances related to muting the microphone as in the case of the Applied Linguistics group and requesting intervention as in the case of the Local Administration group. Regardless of their limited occurrence during the synchronous sessions, the interaction between the two modes, voice and text chats, influenced the nature of the conversation as the instance where the two modes were merged was manifested through talking about the comment that was written on the chat after being heavily concentrated on the content (see Section 6.1.3).

The use of the microphone seemed to be adequate to the length of comments and the level of complexity of the topics discussed. Specifically, if any participant needed to say something, he/she invariably intervened using the microphone. Students perceived that using the microphone allowed them to give instant feedback and contribute spontaneously to the conversation without taking time to type the answers or modify them although some instances of background noise seemed to be interfering with the flow of the conversations.

The level of familiarity with the tool used (see Section 5.1.4), the attitude of students towards the content, and the difficulty of the content discussed (see Section 5.2.4), all of which are areas of diversity between the two groups involved in this study and within the group of students itself and which need to be balanced with an understanding of the affordances of the online synchronous environment due to its ability to engage students to actively interact with each other and with the content, along with the immediacy of the interaction (see Section 3.3.2). However, the immediacy that this environment offers when combined with the lack of visual cues could be a drawback as it becomes difficult to indicate the extent to which students are comfortable interacting with each other and with the content discussed; for example, when the peer facilitator of the Applied Linguistics group was encouraging students to use the webcam and contribute to the discussion, AL-SU and AL-SO commented that they were shy which indicates discomfort (Section 6.1.2).

Some students preferred not to use the webcam which resulted in the lack of visual cues; however, the peer facilitators had a pivotal role to play in instigating any interaction, be that social engagement or content discussion in the online synchronous sessions of this study. Even though a small number of participants were using the webcam, others showed reticence to use it, favouring instead the microphone only (see Section 5.2.5). However, this did vary between the two groups, amongst participants, and across the six sessions.

It was evident from the students' answers in the initial and final interviews (Sections 5.1.3 and 5.2.5) that preferring to use the webcam or not was related to the extent of feeling they were in a secure environment such as the case of the Applied Linguistics group, in which participants were becoming comfortable over time with the synchronous online environment; however, in the case of the Local Administration group, only LA-SK used the webcam while the other students reported that the webcam would have no effect on their discussion as what mattered most was the collaborative problem-solving and finding answers to enquiry questions posed in the sessions (Section 5.2.5). Other reasons of not using the webcam included having male participants in the group as reported by LA-SJ; whereas LA-SS's feeling of embarrassment for

being the only female using the webcam (Section 5.2.5) goes beyond this original idea of gender segregation in Muslim societies (Al-Harthi, 2005) in that deciding to turn off the webcam was in order to conform to the peer group since she learned that no one was using it. However, the peer facilitator of the Applied Linguistics group had a different opinion stating in her reflective logs and final interview that she did not feel comfortable talking to profile pictures noting that not using the webcam has assisted in the low engagement and responsiveness of the students and this was also evident in the high proportion of comments she made compared to her peers especially in sessions where not all participants were using the webcam (Tables 6.2 and 6.3); whereas, the peer facilitator of the Local Administration group commented that the sessions would be better with the use of the webcam; however despite not using the webcam, the contribution of this peer group was even higher than the Applied Linguistics group (Figures 6.1 and 7.1) which, in this case, could be viewed as a result of not only the academic but also the professional relevance of the topics discussed which played a role in fostering peer collaboration and not the use of the webcam as has been found in earlier research (e.g. Pavlov et al., 2021).

Furthermore, the lack of visual cues may also increase the level of "pedagogical lurking" which means sitting quietly during the session and only listen and observe yet still feel a member of the community (Dennen, 2008). Although Dennen (2008) views that it could mean active involvement, it was still one sided. This phenomenon of pedagogical lurking took place both synchronously when AL-SU from the first group and LA-SJ and LA-SC from the second group were not showing any active contribution and asynchronously when AL-SU and LA-SJ indicated their involvement in the learning process by listening to the recordings after the sessions as was mentioned in their apology messages explaining not being able to attend some of the sessions for time constraints and family reasons. However, it should be acknowledged that these participants did not continue attending the sessions (see Tables 6.1 and 7.1). On the other hand, Kear and his colleagues (2012) mention that coping with the flood of information and resulting cognitive overload could be chaotic and troublesome which also explains the hesitation of some participants and their low engagement in the conversation and sticking only to listening to the contributions of the other participants as LA-SS and LA-SG mentioned in the final interviews (Section 5.2.5). However, a useful strategy that the peer facilitators in both groups were using was to summarise what had been said in the middle and at the end of the session to reinforce the understanding of the attended participants.

Having the use of the webcam not being forced was the result of a compromise in giving the students the freedom to use technology the way they want, whether to use voice or webcam or

both; however, being a group of peers in this online environment was exempted from the need to finding a balance between including the active participants in the task and conceivably excluding a hesitant participant as the PL groups formed in this study were different in terms of having the participants voluntarily willing to exert efforts in asking questions and discussing possible solutions; yet not being intimidated by the power relation that a teaching figure could impose on the conversation.

According to most students' narratives, Skype was a compatible technology with the PL experience which afforded avenues of interaction that students exploited either by using a combination of voice and webcam, or voice only, or the document sharing feature, sending messages in the chat box and the polling function to decide on the timing of the sessions, except for the screen sharing which was not used thus, by doing so, it can be said that the learning environment was used effectively which enabled students to engage interactively (Twomey, 2009). Technical issues were occasionally happening due to the sporadic internet connectivity of some individual participants but did not have to do with the functionality within Skype except for not knowing how to mute and unmute the microphone which resulted in interrupting the discussion with some external sounds. Research indicates that the teacher has a strong influence in maximizing the affordances of the technology (e.g. Palloff & Pratt, 2000; Al-Maawali, 2020) however, as far as this research is concerned, the two peer facilitators involved in this study had also contributed to maximizing the affordances of Skype by reminding students of the necessity to mute the microphone to not have outside sounds interfering with the flow of the discussion and encouraging them to use the webcam for a more engaging learning environment and this was announced at the beginning of each session using a polite request (Chapters 6 and 7).

Becoming comfortable with Skype was also evident from the noticeable differences in how well participants were adapting to the online synchronous environment based on their narratives in the final interviews (Section 5.2.5). However, the perceived disadvantages associated with not muting the microphone or not using the webcam were outweighed by the students' reported benefits of being able to interact with others in a conversation while joining from home (Section 5.2.5). Alongside spontaneity, the synchronicity of the online sessions and the intonation in speech that was used to assist with making meaning made them similar to face-to-face sessions or similar to meeting in the library as described by LA-SS (Section 5.2.4) whereby a group of peers were actively engaged in a learning community to discuss topics they found hard to understand or need different insights into it (Garrison & Arbaugh, 2007). Another instance that made the synchronous discussion mirrors the physical classroom was the use of gestures as a social cue by AL-SN to tell AL-ST that her microphone was turned off (Section 6.1.2). As a

result, to maintain the same level of student social contact as in a physical classroom, online synchronous learning activities should be undertaken using appropriate technologies (e.g. a synchronous conferencing system with real-time videos) (Finkelstein 2009).

The difference in the facilitation strategies and the discipline standards of each group alongside the rich administrative experience of LA-SK and the teaching background of AL-SN that was manifested through the way of introducing the topic, seeking consensus before moving to the next point and summarising contributions had an impact on the nature and the flow of the discussions. For example, while the Applied Linguistics group was using the identification of keywords in the problem statement as an icebreaker, the second group was directly starting their sessions with inquiry-based questions. However, both strategies prompted students to be involved in active learning that was infiltrated by some social conversations. In the online environment, this simultaneous communication could yield both positive and negative results. It indicated that students were thoroughly engaged in the discussion, and they were contributing freely by asking or answering questions. However, the lack of visual cues and the weak internet connection made some participants talk at the same time and therefore affected the organisation of the discussion. This is also related to the approach of the peer facilitators in monitoring the sessions by not being controlling which resulted in free-flowing nature of the conversation that was constructed with the considerable students' participation and involvement (Cox, et al., 2004), although there had been some instances when the flow of the discussion was interrupted by some noises and the unstable internet connection alongside talking over one another and the difficulty of detecting signs of confusion or desire to talk because of not using the webcam; for example, LA-SS used the chat box to request intervention (Section 7.1.1) which was similar to raising hands in the face-to-face classroom or even similar to using the hand-up icon before speaking in a virtual situation.

 In short, the lack of experience in using Skype by some students and the unstable access to internet connection that was a common problem faced by both students living in the city and in rural areas were the main challenges in synchronous online peer learning. Although this is unique to the context of this study, synchronicity was also important as all the members of the group needed good access to the internet to communicate at the same time.

8.1.3 Peer group interactions in the online synchronous sessions

It was formerly thought that the educational approaches of DE lie somewhere on a scale between interaction (in which the student interacts with the teacher who is the sole source of knowledge) and independence in learning solely from materials (e.g. Sewart, 1982). However,

with computer mediated learning technology, both can coexist (Garrison, 2000) and "getting the mix of interaction and independence right may not necessitate combining more of one at the expense of the other" (Garrison, 2006, p. 238). The multiplicity of connections that the interaction involves (Anderson, 2004; Figure 3.3) is viewed by Garrison and Arbaugh (2007) as playing a significant role in developing a collaborative learning community while Moore (2007) believes that it minimises transactional distance. This study combines both views and the emerging collaborative learning community was observed to a large extent across the two groups. This was mainly related to the voluntary participation of students, readiness to involve in Skype meetings and motivation to learn collaboratively with peers in an effort to achieve a set of goals by the end of each session, namely revising for the exams and clarifying ambiguities (Sections 5.1.6 and 5.2.1). Besides, participants were not under the pressure of competition, scoring high marks or evaluation by the teacher.

In addressing the aim of describing the experience of interaction in the PL sessions, this research focussed on the involvement of participants in the sessions, the content of the discussion, and the communication avenues in order to explore the interactions taking place in the PL sessions. The three presences of the CoI framework (Garrison et al., 1999; Section 3.5) were used to further examine how these elements came together to build a community of peer learners.

8.1.3.1 Peer Interaction

Participants valued the support provided by their participation in the online synchronous sessions even so they were adults pursuing a master's degree at a distance and thus self-directed learners able to learn independently (Garrison, 2003). They also reported positively on the contribution of these sessions to their DL experience, especially given their perceived difficulty of learning in isolation without the support of a teacher or other students (Section 5.1.2) that was compensated by the perceived learning with peers (Section 5.2.4) and sense of community that these sessions provided (Section 5.2.3).

As stated earlier, unlike the Applied Linguistics group, the Local Administration group did not attach too much importance to the value of the visual cues; however, participants were identified to each other in that synchronous environment either by name on their profile that generally indicated gender, personal pictures as a profile picture that were used by all the male participants and only two female participants from the Local Administration group (LA-SA and LA-SY), and voice which generally indicated gender as well; whereas, age was not directly disclosed in the social discourse across the sessions. Given that the participants' ages ranged between 27 to 60 years old (Section 5.1.1), it was expected that this age variance would

influence the group dynamics and create power differential within the groups in that older participants would feel less favourable to work with younger participants and therefore disrupts the development of the sense of community. Hence, age and even gender did not matter as much as the working experience that had a positive influence on the perceived facilitation of learning, especially for the Local Administration group (Sections 5.2.4 and 7.6.4). Besides, given that most of the participants were professionals and some of them simply wanted to get promoted at work (Section 5.1.1), there was no particular concern with age, which is why there was no analysis by age. As far as gender is concerned, it should also be noted that the Applied Linguistics group had more males than females, but it was a female participant who volunteered to be the peer facilitator whereas the Local Administration group had almost equal number of males and females, but the volunteered peer facilitator was a male. This generally indicate that, similar to age-bias, gender-bias was not a potential inhibiter to the development of the sense of community amongst these peer groups but it did inhibit the participation of some females from the background population (Section 4.1.1) and the tendency to use the webcam (Section 5.1.3).

In online environments that have the teacher involved, teaching and social presence were proved to have a significant influence on cognitive presence (e.g. Garrison et al., 2010; Shea & Bidjerano, 2009); however, even with no presence of a teacher in this study, the interaction between the social presence and the teaching presence built the groups' connectivity, which was necessary to foster the collaborative work on the problems of cognitive presence (Shea & Bidjerano, 2009; Section 3.5). The high number of comments indicating cognitive presence (e.g. Figures 6.5 and 7.1) is evidence of how Skype as a technology and PL as a strategy supported the phases of cognitive presence (Garrison, 2007) during those interactions. For the Applied Linguistics group, the questions of the revised past exams were the triggering events, identifying keywords denoted exploration, trying to link those keywords with each other to seek an answer and proposing a solution signified integration (Section 3.5.2). However, for the Local Administration group, the triggering event was in the form of inquiry-based questions generated by the students themselves, group brainstorming and trying to understand the nature of the problem signified exploration, combining ideas and information conducive to the creation of solutions and providing answers denoted integration; whereas, similar to other research investigating synchronous online discussions (e.g. Akyol & Garrison, 2011; Tik, 2016), both groups produced no discussion pertaining to the resolution phase through which they explained how they solved the problem (see Appendices M and N) and this could be related to reasons such as the absence of the teacher (Celentin, 2007; Garrison et al., 2001) whose role is to provide a metacognitive commentary as to what students are doing and why (Garrison, 2007). Perhaps

most importantly, employing effective direct teaching strategies and encouraging opportunities for self-evaluation and reflection on the learning process would have helped the discussion move forward to the resolution phase. However, there is still the need to further investigate what adaptations might be made to bring the application phase through peer learning.

On the other hand, peer facilitation and the immediacy offered by the Skype synchronous environment succeeded to maximise interaction and overcome the challenges frequently encountered in asynchronous environments pertaining to progressing from the exploratory phase to integration phase (Vaughn & Garrison, 2005; Appendices M and N), although this process took time as evidenced by the length of the sessions, especially for the Local Administration group due to the nature of the conversation that was characterised by student-generated questions and the element of uncertainty and disagreement with some answers which made participants go back to the previous phases to clarify more information and even when integrating information from lectures and articles, the teacher's evaluation of the answers was still needed as mentioned in some students' reflective logs (Section 7.5.4) which indicate that even the absence of the teacher's "authoritarian presence" (Rourke & Anderson, 2002, p. 4) may influence students' thoughts about personal competence and this could be resulted from the belief that the teacher is the sole provider and validator of correct answers (Section 2.5). It should be acknowledged however that the peer facilitators of both groups played a remarkable role in initiating and prompting the process of finding answers by displaying peer facilitation techniques such as questioning, clarifying, synthesising and summarising, inviting participation (Section 7.4.2), and using phrases of encouragement (Section 6.3.2). With this type of support, participants were able to have full autonomy over their learning without needing to meet the expectations set by the teacher and instead, they generally felt comfortable diving into the process of learning and developing skills of independent problem-solving.

Teaching presence, in this research, was a combination of design and organisation (e.g. setting the content of the discussion, providing instructions on how to mute/unmute the microphone, establishing ground rules for participation, and providing rationale for discussion), facilitation (e.g. guiding the group towards agreement about the topics, inviting peers to contribute to the discussion, promoting the exploration of concepts, presenting follow-up topics, re-focussing and summarising the discussion), and direct instruction (e.g. helping to make the content more comprehensible, providing examples and clarifications, exhibiting processes, and making reference to articles, books, or personal experiences) (Shea et al., 2010; see Appendices M and N). All these three elements were demonstrated by the peer facilitators and the remaining participants, although it was expected that the voluntary role of the peer facilitators would be a

limitation because they were not selected based on the skills and knowledge needed to manage an online discussion in that the peer facilitator of the Applied Linguistics group tended to be the "more able" student as she was nominated by AL-ST explaining that she was one of the high-achieving students in their cohort whereas, the peer facilitator of the Local Administration group could be said to be just more extrovert as he was a self-selected volunteer. It also appeared from the performance of the two peer facilitators in the six sessions that they were able to help the other peers to have a better understanding of the problem and reach a conclusive view that was constructed from different insights as well as encouraging participants to ask questions, explaining ideas, and providing answers which were not too different from the teachers' role (Anderson et al., 2001); however, the remaining participants' teaching presence in the Local Administration discipline context was higher than that of the participants in the Applied Linguistics discipline context due to the difference in the nature of the discourse (Section 8.1.4).

On the other hand, although the role of the peer facilitators was clearly established from the start and explained in the welcoming sessions (see accompanying material), the two peer facilitators in this study were confronted with the challenge of projecting themselves as equal peers from the same programme and not as teachers and this was apparent from both cases in which the peer facilitators were asked to provide explanations and clarifications and the more their facilitation was needed to keep the discussion going, the more difficult was to achieve balance in participation. However, while the peer facilitator of the Local Administration group tended to share the facilitation role with other participants and mostly with LA-SR, the peer facilitator of the Applied Linguistics group chose to be explicit about her role and how it was different from that of the teacher (see Section 6.2.2) but still showed a mixture of direct instruction and facilitation and this supports ideas put forward by Wang and his colleagues (2016) who hold a more positive view of playing the role of a facilitator by an equal peer in that it "helps students immerse to the context and employ advance cognitive skills" (p. 302). Another limitation of the use of peer facilitators rather than teachers included uncertainty about the explanations provided which is also a concern reported by educators comparing it as "the blind leading the blind" in that there is high risk of inaccurate information being perpetuated between students and which might stem from incorrect understanding (Tai et al., 2016). Accordingly, some students from both groups mentioned in their final interviews that they presented what remained ambiguous to the teacher via email in order to confirm the accuracy of some information they were uncertain about (Section 5.2.2).

As mentioned earlier, it was not only the peer facilitators who were answering questions and giving feedback, rather, the creation of a supportive atmosphere was also the consequence of

the collaboration of the members and contribution to facilitate the learning of each other. All questions asked by members, whether simple or complex, were dealt with seriously; thus, these sessions showed a facilitative-supportive approach and even with the lack of visual cues, students were still able to share the responsibility to direct the learning of each other and learn from one another at the same time. Additionally, the peer facilitators felt that they had benefitted from the sessions as much as the other students did in that they mentioned confidence, openness to new ideas and maintaining organisation (Sections 5.2.3 and 5.2.7) as key benefits of leading the sessions which is a common finding in many studies (e.g. Keppell et al., 2011; Keenan, 2014).

The increased engagement within the group also resulted from social interaction when combined with the teaching presence (Sections 6.4.3 and 7.3.3). The occurrence of social interaction in both groups was stimulated by the nature of the discourse such as talking about environmental issues (Section 7.5.3) or reflecting on the discussion itself (Section 6.3.2) in addition to the lack of knowledge about how to unmute the microphone (Section 6.1.2) and external factors such as background noise and the unstable internet connectivity (Section 7.2.3). Having students connected from their homes, it was inevitable to hear some sounds in the background like side talk, doors opening and closing, baby crying, and the sound of the television. Although these instances denote the level of distraction experienced by participants where all of them have been communicating at the same time, they also show how participants' personal lives unintentionally collided with the interaction that was happening in the online session by making them more disclosed to each other and increasing bond felt within the group which, in return, contributed to the development of social presence which is a salient component in the fostering of "a functional learning community" amongst the group (Dawson, 2006, p.160). From the beginning through the end of the sessions, the peer facilitators of both groups were playing a big role in forming and maintaining social presence (Tables 6.5 and 7.6). In fact, all the members of the groups were projecting and facilitating affective (e.g. humour), open communication (e.g. complementing others' contributions), and group cohesion (e.g. using inclusive pronouns, greetings, and social sharing) (Shea et al., 2010; see Chapters 6 and 7).

As the sessions progressed, social presence in the form of calling each other by their real names, emotional and social support as projected through comments such as: "Do not worry, we are all here to learn", "very good idea", and "you came today prepared and well-armed" became an essential part of the discussions. These supportive statements played a pivotal role in lightening the atmosphere and taking a break from the intensive content-focused discussions and helped minimise the cognitive overload (Kear et al., 2012). However, it was interesting to notice that

participants did not contribute to social presence as much as they contributed to the cognitive presence (Figures 6.5 and 7.1) given that the timing of the sessions was late alongside the high number of "stuck places" that students were trying to get past as the exams were approaching. Some students (LA-SF, AL-SI, and LA-SL) even described some instances that helped to lighten the intensity of the discussion as "side talk" (Section 7.1.4) or "waste of time" (Section 5.2.3) in that they were perceived to go against the purpose of the sessions which was to revise for the exams and which was the reason why they accepted to participate in the first place (Section 5.1.6).

It was just the intermittent attendance, the lack of visual cues, and the silence of some participants at the very beginning that made the development of the community take time. However, students did not hesitate from the start to share their feelings and thoughts and even acknowledge that they were holding wrong conceptions such as correcting AL-SN in the Applied Linguistics group when she confused between two terminologies (Section 6.2.2) or when LA-SS in the Local Administration group admitted of being wrong after being notified by her peers that she was confusing between two legislative decrees (Section 7.4.2). This denotes that it did not take too long for the participants to show confidence within the group and the tendency of students to share their thoughts openly, correct misconceptions, and accept being corrected while having the option of not saying anything at all which was an important factor in helping the sense of the community and inclusion to grow.

8.1.3.2 Interaction with the content

The voluntary act of dedicating time to take part in the Skype sessions despite the hectic schedule and family responsibilities indicated that students were motivated to learn with their peers and found the content they were regularly engaging with beneficial (Section 5.2.4). For both groups, the selection of the content was decided collaboratively in an early stage that preceded the start of the sessions. The content selected for discussions was totally compliant with the content already provided in their programmes. Each group had its own method of presenting the content; for example, the Applied Linguistics group was using past exams topics as the main content of discussion in all the sessions and which included question words that required a descriptive approach to essay writing such as: "*compare*" and "*identify*" (Sections 6.2.1 and 6.3.1) or a critical approach to essay writing such as: "*analyse*" and "*discuss*" (Sections 6.4.1 and 6.6.1) (Woodward-Kron, 2002); whereas, the Local Administration group decided to select six modules to deal with in each session and was presenting the content in the

form of open-ended questions regarding some challenging cases or administrative procedures already covered in their lectures.

In this regard, both methods of presenting the content maximised the participants' interaction with the content as they were thought stimulating and prompted the development of answers even when not feeling sure about the answer (Section 5.2.4) or confident about the topic discussed (Section 7.4.2). Hence, a combination of teaching presence and cognitive presence was necessitated for interaction with the content. However, what was interesting about the process of collaborative problem-solving is that students were starting with breaking down the topic into manageable chunks either by identifying keywords as was always the case for the Applied Linguistics group or starting directly with defining key terminologies or explaining processes depending on the question posed as was the case of the Local Administration group and in doing so, participants were realising that they were not the only ones struggling to understand a particular aspect and found themselves identifying areas of misconceptions or lack of understanding along the way to finding the answer.

Although could be a potential barrier to students' engagement with the content, one aspect of understanding the content in an Applied Linguistics programme is familiarity with the terminologies and related theories; whereas, understanding the content in the field of Local Administration necessitates familiarity with terminologies and related legislative acts and articles. The Applied Linguistics group was dealing more with theoretical content to be able to answer the questions, students had to explain, in relation to theory, a specific phenomenon of language learning and analyse practical applications of theories and their ramifications. Therefore, to solve the problem mentioned in the text of the question, students needed to have a prior understanding of the content and this was the same for the other group which took a more analytical approach to discussing administrative cases such as analysing decisions taken by administrative and ordinary justice to solve legal issues related to the administrative milieu (Section 7.4.1). Thus, learning Applied Linguistics or Local Administration content in a community of learners without the involvement of a teacher as a content expert did not stop participants from trying to clarify and simplify concepts and terminologies to each other (Section 5.2.4). However, the support provided by peers and the peer facilitators in terms of stimulating thoughts by asking questions and enhancing comprehension by providing examples from real-life situations (Section 6.5.2) and linking to professional experiences when necessary (Section 7.4.2) was still not sufficient for some students as they argued for the need of the teacher in order to confirm their content knowledge and understanding (Section 5.2.7).

8.1.4 Nature of the conversation in the Skype peer learning sessions

Regarding the fourth aim of the study pertaining to examining the nature of the synchronous peer-led discussions for two discipline contexts (Applied Linguistics and Local Administration), the affordances of the online synchronous environment (Section 8.1.2), the emergence of the PL community over time (Section 8.1.3.1), and the way the content was presented (Section 8.1.3.2) were found to be key factors contributing to the nature of the Skype peer-led conversations. Hence, the development of the conversation is influenced by the interrelationship between these factors; whereas the interaction amongst the three presences: cognitive presence, social presence, and teaching presence provided further insight into this process.

As indicated in Chapters 6 and 7, the conversation in both groups initially developed between the first attendees in the form of social sharing (social presence) and then moved to content discussion (cognitive presence) that was prompted by the peer facilitators (teaching presence) either by reading the questions of the designated past exam as in the case of the Applied Linguistics group or asking an open-ended question about a challenging topic related to a specific module which was the case of the Local Administration group. All the sessions' conversations of both groups were performed using mostly the microphone which resulted in having long comments produced by the participants. However, the text messages posted on the chat only in the first sessions of both groups (Sections 6.1.2 and 7.1.2) were concise and to the point comments.

Accordingly, interactions often followed a one-to-many pattern and even when it was one-to-one, it effectively became one-to-many because when answering a specific individual's question, the answer was shared with the entire group as the microphone was generally used to carry out this conversation. The communication behaviour in this synchronous setting was often similar to conventional face-to-face interactions, which relied on a turn taking system in which one participant spoke at a time except for instances when the limited bandwidth significantly affected the quality of the audio and video resulting in muffled sound and talking at the same time. This problem was aggravated in the case of the Local administration group due to the limited visual cues unlike the Applied Linguistics group in which such issues were resolved quickly (Section 6.1.2). Thus, the role of the peer facilitator in the online synchronous sessions was important to create and maintain coherence among a community of learners especially with the limited visual cues. Plus, the presence of limited visual cues made it hard to detect signs of students' understanding, confusion, or uncertainty. However, participants would project doubt

by adding questions at the end of their answers which indicated their desire to confirm understanding, addressing misunderstanding, or seeking consensus and agreement such as: "This what I personally think, I am really not sure, what about you?" (AL-ST, Session 4), "this means there is freedom in the selection, right?" (LA-SA, Session 6), "please correct me if I am wrong?" (LA-SL, Session 2). These scenarios were critical for the development of cognitive presence in that participants could scaffold their learning in a social environment of collaboration by bridging gaps in understanding using examples and excerpts from lectures or googling terms on spot and reading to each other what they found which indicated the active participation in the process of collaborative construction of meaning; in other words, students could learn to be their own teachers.

As stated earlier, social conversations took place at the very beginning of the sessions between the first-comers amongst which the peer facilitators who were usually the first ones to start the ball rolling by displaying self-disclosure following one-to-many pattern of interaction: "Today, we have some guests in the house so if you hear anything in the background just pretend you did not hear anything (Laughing)" (AL-SN), "let me finish my sandwich before the rest join us" (LA-SK). For the Applied Linguistics group, breaking the ice continued to be displayed by AL-SN throughout all the six sessions; whereas, for the Local Administration group, it was until Sessions 5 and 6 that some peers other than the peer facilitator (LA-SA in Session 5 and LA-SR in Session 6) were confident to initiate the discussion; however, in both cases, the growth of social presence at the beginning contributed to fostering group cohesion which enhanced confidence and helped the cognitive presence to evolve in a collective learning environment.

The social conversation that follows a one-to-one pattern of interaction also appeared occasionally across the sessions. However, there were some situations identified in this study in the first sessions that were degrading the social presence and inhibited the interaction in that participants who knew each other before taking part in these sessions were the ones who mostly exchanged social conversations such as the case of AL-SN and AL-ST in the group of Applied Linguistics (Section 6.2.2) or when LA-SS in the group of Local Administration addressed LA-SR directly to enquire about a content-related aspect (Section 7.3.2) which resulted in overshadowing those who they did not know before. Generally, developing social interaction between participants who were not familiar with each other occurred usually in the form of support and encouragement but as the sessions were progressing, participants started addressing each other by their names and became more comfortable to engage in social sharing.

Since the social interactions were also verbal, they were generally taking time and the discussion was refocussed mostly by a peer making a polite request to go back to the topic (Sections 6.5.2 and 7.1.2). In this regard, students showed a sense of community with no issues in confidence to express their thoughts (Section 6.3.2) and share personal experiences (Section 7.4.2) and even to support each other directly by responding to each other's questions and offering explanations.

8.1.5 Students' perceptions of the value of the Skype peer learning sessions

Participants reported that their learning at a distance was an isolating experience (Section 5.1.2), even though the flexibility of this mode of study was thought to be convenient to students' whose circumstances can be quite diverse (Section 5.1.1). Similar conception was that adult learners are capable of self-directed learning which is composed of self-monitoring, motivation, and self-management (Section 3.1.1); however, without guidance and support, this may not produce the desired outcomes (Garrison, 2003).

In addressing the fifth aim of the study pertaining to the students' perceptions of the Skype PL sessions, it was found that students perceived the value of the Skype PL sessions as being informative and supportive. Participants stated expectations that the sessions would provide them with the opportunity to understand the content knowledge, motivate them to complete the programme, and allow them to be a part of a classroom-like community and hence feel less isolated (Section 5.1.6). From this, it can be seen that these expectations reflected the students' need for academic support, an engaging learning experience, and sense of community. These three elements did not only influence how students wanted the sessions to be but also how they perceived their value and therefore these expectations contributed to the perceived value of the Skype PL sessions and remained till the end of the sessions (Section 5.2.1). Furthermore, by accepting to attend these sessions every weekend, it was assumed that motivation would remain constant; however, the timing of the sessions, life responsibilities, and the internet connection were reported as reasons for the limited commitment to the sessions (Section 5.2.1). The potential of forming a relationship with peers in a collaborative learning setting (Section 5.2.3) alongside asking questions that were of concern or not even considered asking and getting a variety of feedback were perceived as benefits of involvement in these sessions (Section 5.2.4).

Participants viewed these sessions especially beneficial in terms of providing active and instant communication and allowing the real-time discussion of problems and their solutions (Section 5.2.4). Being involved in these sessions made students experience a new kind of learning and change the "routine" that they felt when they were interacting only with the screen (Section

5.2.4). They also believed that what contributed most to their learning was sharing their struggles, correcting misconceptions, and confirming their understanding by asking questions and getting immediate feedback. Another contributor to their learning was the facilitation of peers and the provision of simplified explanations that stemmed from real life situations and professional experiences. Participants also commented on feeling sense of progress and how the knowledge gained from these sessions was applied in the end of term exams; however, for the Local Administration group, this knowledge was not only academically significant but also relevant to their professional practice (Section 5.2.4).

Participants perceived that facilitation and organisation are vital to synchronous discussions and mentioned that the peer facilitators played an important role in steering the conversation, clarifying terminologies, supporting arguments with examples and most importantly motivating their peers to engage in the discussion (Section 5.2.7). While the Local Administration group stressed on the need for a rich professional experience for the role of a peer facilitator, the Applied Linguistics group stressed more on the academic experience and recommended having a peer facilitator from the previous cohort. Other recommendations for an effective facilitation included time management and the ability to maintain organisation (Section 5.2.7).

By showing positive attitude and motivation to attend the sessions every weekend, it was assumed that this motivation would remain constant. However, participants did not carry on the meetings justifying that there had been no need for them after finishing the exams (Section 5.2.6). While some participants welcomed the idea of having similar sessions in the future and even suggested their integration in the programme with the supervision of a teacher to select topics and track progress, others believed that these sessions should remain informal and optional explaining that not all students would prefer online synchronous and collaborative learning (Section 5.2.7) and this can also be evidenced by the small number of participants who accepted to take part in this study. In addition to convenience regarding issues of time, pedagogical preferences for synchronous collaborative learning, and concerns about internet and technical issues, it was also perceived that the content of the discussion determines the place of the synchronous PL sessions in the DL programme. Although focussing more on their usefulness when conducted for the purpose of revising for the exams (Section 5.2.7), which is in line with the study of Packham and Miller (2000) who have found in their Welsh context that the demand for PL is mainly assignment driven (as cited in Huijser & Kimmins, 2006), participants also believed that the integration of PL sessions in the DL programme should serve the purpose of discussing a content that was not previously posted on the online platform and suggested a new role for the teacher that is to supervise and direct the peer facilitators (Section

5.2.7) or to review the recordings and make recommendations (Section 5.2.2). This is particularly interesting as students recognised the value of the recordings to their learning and their usefulness for evaluative reasons although being aware that the recordings were only for research purposes. It can be argued that having a pre-defined design supported by a teacher to run the sessions (Ashwin, 2003) can be seen as a way to formalise aspects of PL. However, it should be noted that formalising aspects of PL should not be intended to give the teacher a controlling role in informal learning, but rather to recognise and maximise the potential benefits of PL (Boud, 2001) and at the same time to help both peer facilitators and students develop their understanding of the structure of the sessions.

8.1.6 A Model of online synchronous peer learning

Research on interaction in DL have focussed more on producing models pertaining to either asynchronous communication (Figure 3.4) or a combination of synchronous and asynchronous communication (Figure 3.3). Therefore, based on the investigation of the interaction between peers in an online synchronous environment, this research proposes a model of online synchronous PL to address the sixth aim of the study.

What seems to indicate that the Skype PL environments of the two groups involved in this study supported building an effective CoI is that all elements of CoI have been observed except for the resolution or application phase of the cognitive presence that is related to the role of the teacher to push students towards testing and defending solutions by providing metacognitive comments as to what students are doing and why (Akyol & Garrison, 2010; Garrison, 2007). Given that the PL practice explored in this study is based on a group of peers from the same DL programme and a nominated peer facilitator to guide and moderate the discussion, the main focus is on interaction and learning and therefore, the centre of the synchronous sessions is the act of PL (Figure 8.1).

The three overarching elements of the proposed model (Figure 8.1) are the students' expectations for learning which include what students want to learn and what counts as progress towards achieving their learning goals, the discipline-related knowledge which refers to the theoretical and practical knowledge related to a specific academic discipline, and the online synchronous communication medium that affords avenues of synchronous interaction (e.g. audio and/or video, text chat) and creates the interactive environment within which the act of PL takes place. These three elements were recognised from this study as the key factors that most directly affect the dynamics of the PL process and influence the creation and continuity of the peer-based learning community. The PL process, on the other hand, involves the peer

facilitator, the students and their engagement with the content and they, in return, also interact with the expectations for learning through reflections on the PL practice, the discipline-related knowledge by connecting and applying theoretical knowledge related to the field of study, and the communication medium by choosing the mode of communication (e.g. audio and/or video and text chat). When the three actors of the PL process (peer facilitator, students, and content) interact with each other and with the synchronous medium of communication, they result in a real-time PL by passing through the peer-scaffolded CoI which is the channel through which the act of PL can take place. However, what creates the borderline between the internal layer of the model that represents the interactions within the PL process and external layer of the model that represents the interactions with the elements that influence the PL process is the two-way interaction between the students, the peer facilitator, and the content.
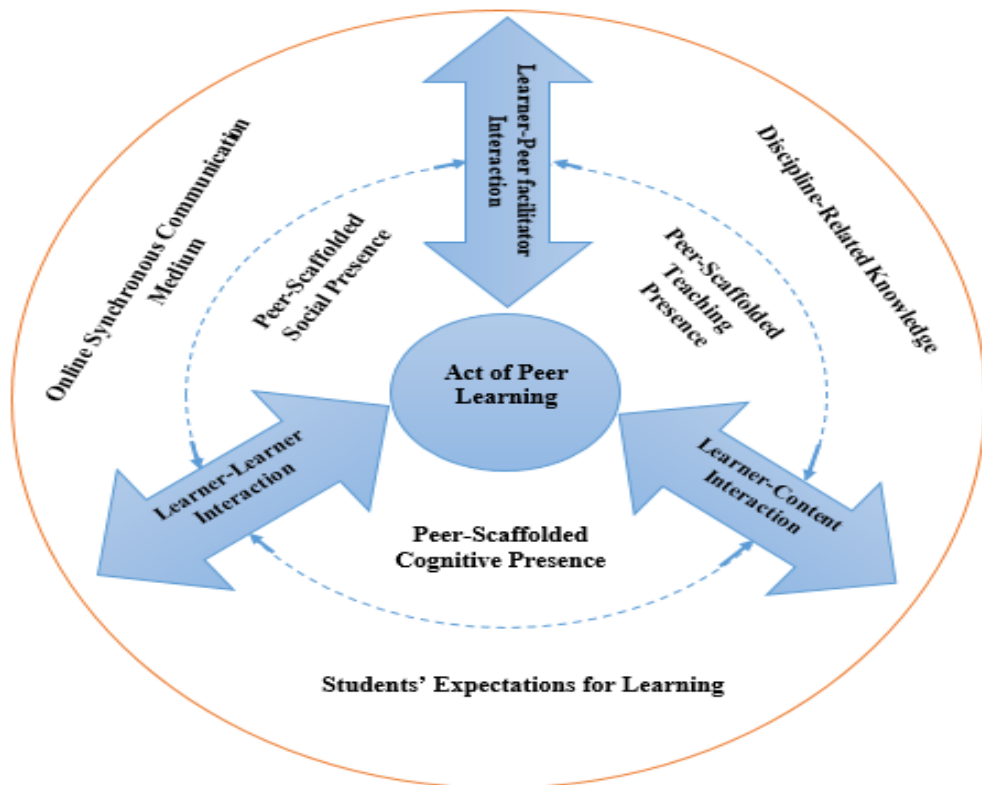
Figure 8.1 A model of online synchronous peer learning

This model is visualised as a layered interactive process centred by the act of PL that involves synergistic participation and interaction amongst students and between students and the content to reach an understanding of the topic being discussed. The internal layer encircling the act of PL shows the process of scaffolding the learning community which involves active support from peers to socially construct meaning and collectively confirm understanding. Again, this

process of active collective knowledge building necessitates two-way interaction between the peer facilitator, students, and content. In order to provide a supportive environment for a meaningful discussion, all students contribute to the organisation of the discussion including the selection, presentation, and facilitation of the content as well as facilitating the collaboration and advancing understanding (peer-scaffolded teaching presence) which leads to the process of unpacking the complexity of the content by "questioning, searching for key concepts, making connections, injection of new ideas or concepts, constructing frameworks, diagnosis of misconceptions, and reviewing and summarizing" (Garrison & Anderson, 2003, p.86) (peer-scaffolded cognitive presence). With the mediation of the mode of communication, peers can also foster positive connection between each other, help each other to identify with the group and maintain open communication (Tu & McIsaac, 2002) (peer-scaffolded social presence). These three elements (peer-scaffolded cognitive presence, peer-scaffolded social presence, and peer-scaffolded teaching presence), that are situated between the external layer and the centre of the model that is the act of PL, represent factors in learning and student interaction in that the interactions between the elements of peer-scaffolded teaching presence and peer-scaffolded social presence create a conducive setting for active and meaningful discussion (Section 3.5). Establishing and maintaining the act of PL is therefore the result of the interplay between the peer-scaffolded social presence and the other two elements of the peer-based CoI.

By passing through the three aforementioned CoI constructs to arrive at the act of PL, the three main factors that are situated in the external layer of the model come into play. To be more specific, for the peer facilitator and students to engage with the content they need to have discipline-related knowledge and the interaction between these three actors is guided by the students' expectations for learning through which students decide on what they want to learn and how to achieve their learning goals. The synchronicity provided by the communication medium also allows the interplay between the peer facilitator, the students, and the content and mediates their interaction within the CoI and these factors altogether, combined with the elements of a peer-based CoI provide a real-time meaningful discussion.

The synchronous environment plays an important role in enhancing the dynamic nature of the act of PL in that participants in this research were able to use different avenues of synchronous communication at the same time; for example, using text chat while communicating and using audio and video features of Skype (Section 6.1.3). The use of this model is demonstrated in the two discipline contexts investigated in this study (Applied Linguistics and Local Administration). The organisation and presentation of the content was different based on the standards of each discipline; for example, the organisation of the Applied Linguistics content

was in the form of unpackaging the question and working on finding answers. This act of PL in relation to this discipline was consistent with the notion of problem-solving where students had to break down the question into parts and identify each part as a problem, find keywords, explore and integrate these keywords then suggest solutions; whereas, the nature of the content organisation of the Local Administration discipline was more linked to a case-based discussion and open enquiry questions that steered the flow of the conversation by examining real-life administrative cases. In both cases, the collective organisation and verbal presentation of the content alongside the real-time facilitation among peers that was mediated through the immediacy of the synchronous environment scaffolded the flow of the discussion across the peer-based CoI to the act of PL. Hence, the act of PL demonstrated in both discipline contexts was not only about constructing meaning and confirming understanding but also developing skills of facilitating and solving a problem and even applying knowledge in both academic and professional contexts (Section 5.2.4). Building on this, the immediacy of the online synchronous PL environment can be said to focus more on the act of learning (learning-centred) unlike the asynchronous environments where the focus can be more on the actors of learning; i.e., who said what, to whom, and when (learner-centred).

8.2 Implications

The findings from this study provide insight into distance learners' experiences of building a learning community and interacting with peers in a synchronous environment mediated by Skype. Thus, discussing what implications these findings have for theory and practice is important to emphasize the role of building peer-based learning communities in DL programmes and illustrate the potential benefits and limitations of the synchronous audio-visual environments in terms of providing interactivity and scaffolding collaborative inquiry learning.

8.2.1 Implications for the development of online peer-based Communities of Inquiry

What implies that synchronous interactions support the formation of a peer-based Community of Inquiry is that all of the three elements of CoI have been observed in the Skype PL sessions. Given that higher levels of cognitive presence in both discipline contexts showed an impact on students' perceived learning as well as satisfaction with the sessions, the design and planning of sessions that aim to promote peer interaction need to focus on the importance of fostering cognitive presence which allows a successful learning experience as is indicated by a number of researchers (e.g. Gwee & Damodaran, 2015; Kanuka & Garrison, 2004). Participants in this study expressed their desire for discussions that would enable them to interact with peers in a meaningful way. The findings imply that giving students a space to share similar inquiry with

peers whom they may not have chosen to interact with and the opportunity to choose their topics of discussions encouraged them to take ownership of their learning and to engage in an inquiry-based learning. For example, students in the Applied Linguistics group placed emphasis on revising and checking knowledge through past exam papers which could be said to be a form of guided inquiry and problem-based learning. In contrast, the Local Administration group preferred open inquiry and case-based learning. Hence, more attention needs to be paid on tailoring strategies and pedagogies based on students' preferred learning activities when implementing PL strategies. On the other hand, despite the difference in terms of the content of discussion and demonstrating different approaches to facilitating the sessions, the two disciplines involved in this study shared a number of characteristics including the convergence between theoretical and experiential knowledge (Section 3.1.1). Accordingly, it is recommended to include activities and open discussions that encourage students' reflections on their experiences and subsequently share their connections to the content knowledge with their peers in the beginning and also throughout a DL programme. Students can contribute to each other's meaning making and knowledge of a topic by contributing personal insight obtained from previous experiences.

This research also confirmed that although the implemented PL strategy does not involve a teacher, indicators of the teaching presence were still identifiable. This result is aligned with Anderson and his colleagues' argument (2001) that instructional support can also be provided by a peer who scaffolds others' learning which was evident in both groups in which the peer facilitators and some other students were a living example of Vygotsky's scaffolding analogies or Collins's (1991) cognitive apprenticeship (Section 3.1.3) from their position of greater professional account and content knowledge. It is arguable that although the peer facilitators played a critical role in facilitating understanding and promoting students' interaction, their interventions were not all the same nor were they ultimately efficient in enhancing peer collaboration and content knowledge. This is evident in the responses of some students from both groups who expressed their doubts about some conclusions which is an indication that the teacher presence is a commonly important factor for students' perceived learning and satisfaction with the discussion in terms of feeling sense of progress and confidence about conclusions.

Although many authors advocate for a "guide on the side" approach to the teacher's moderation of student discussions, this approach misinterprets the core essence of peer collaboration models (Anderson et al., 2001). In this regard, a good strategy could be post-activity assistance from a teacher as students mostly get stuck at the exploration phase. For example, some of the participants emailed their teachers to check some answers (Section 5.2.2). In addition, training

for the peer facilitators can be supported by teachers to equip them with the necessary knowledge about organisation and facilitation of the discussion. A useful method that was used in this study was providing the peer facilitators with a written plan to ease the management of the synchronous session as it was expected that they may get distracted and forget the task at hand (see accompanying material). Therefore, it is recommended to give directions about how to start the introduction of the session, how to redirect the discussion or draw in participants, how to overcome the challenge of the background sounds or students not taking turns and talking over each other, and most importantly informing students about the role of the peer facilitator and how it is different from that of the teacher. It may also be manageable that the facilitation of the group may be rotated so all the participants may have an equal opportunity to lead the discussion. However, the viability of rotating the roles needs further investigation.

In a broader context, students' engagement in Skype PL was influenced by traditional views of teaching and learning (Section 2.5), especially the socially constructed power relations and conceptions of the teacher's central role in transmitting knowledge which are in line with studies indicating that cooperative learning is not supported by students with a transmission conception of teaching and learning (e.g. Herrmann, 2013). One evidence from this research is the perceived role of the peer facilitators as equal to teachers. Similarly, the belief in the traditional view of learning and teaching was also captured in some teachers' answers in the interviews stating that the Algerian students are still not ready for learning at a distance (Section 5.1.1) or even learning with peers without the teacher's guidance as they doubted the viability of online PL thinking that it will turn into chaos (Section 5.2.7) whereas, teachers who held positive perception towards online PL also reported how they designed their chat sessions to be student-centred and intervened only to correct and evaluate answers. Instructors may offer students with fixed time online chats based on their schedule; however, this strategy proved not to be effective as the schedule of the teacher was hectic and also it was evident that the limited number of teachers could not support providing constant direct instruction to 600 students (Section 5.1.2) besides, teacher's intervention may sometimes restrain peer collaboration and student-student interaction. Hence, it is necessary to address teachers' and students' conceptions of what constitutes successful online teaching and learning, and teachers need to encourage and design online PL activities that make sense to students by aligning them to examinations criteria. This can offer supplementary support to distance learners and even give teachers insights into their design, instruction, and managing feedback.

Regardless of the topic discussed, it was noticed in this study that once a risk-free environment was established, indicators of the social presence came into play as most participants used

salutations, humour, praising others' contributions, addressing each other using names, and social sharing. Also, projecting social presence from the part of the peer facilitators played an important role in stimulating interaction and maintaining respect and a safe learning environment. Therefore, the online peer facilitator' skills and dispositions, as well as cognitive contributions, are all equally important when creating a peer-based online CoI.

All participants in the final interviews (Section 5.2.3) agreed on the importance of a sense of community in reducing isolation and overcoming disconnection issues with peers in online distance learning; also, the findings from CoI analysis imply that social presence may have an important role in mediating between cognitive and teaching presence. Therefore, online instructors and programme leaders should focus more on instructional strategies and behaviours that facilitate distance learners' social presence when planning their DL programmes as well as when implementing similar PL strategies such as encouraging students' mutual support and engagement, fostering collaborative discussion through being a peer learner, and modelling facilitating behaviours. Considering that this research implemented welcoming meetings which contributed to the initiation of social presence, similar intentional efforts should also be placed not only at the beginning but also throughout the programme to promote social presence given its direct effects on learning satisfaction when reaching a certain threshold (Kim et al., 2011); however, social presence should not be limited to focussing only on social and emotional interaction, but should also include the facilitation of students' cognitive development especially if the perceived learning, sense of community and motivation to complete the programme were mentioned by students as reasons to participate in the synchronous PL sessions. These particular findings indicate the need for DL teachers and programme managers to rethink the potential of the PL strategies to reduce problems such as attrition (Section 5.1.6) by making students feel a part of a supportive community.

8.2.2 Implications for online synchronous communication

The finding of distance students' desire for communication tools that support real-time interaction (Section 5.1.3) suggests that the Algerian master's DL programmes should provide a variety of communication options to improve student engagement and peer interaction. However, the technical capacity of the online platform was mentioned as one of the reasons behind not using the video-conferencing feature (Section 5.1.3). On the other hand, both proponents and sceptics who saw no need for the use of Skype for PL activities since there was an official platform that included students' forums, emphasized the selection of tools according to students' needs and preferred modes for communicating (Section 5.1.4). Based on these results and in line with the suggestion of LA-T2 (Section 5.1.3), it is recommended to conduct

needs analysis surveys at the beginning of the programme to learn more about students' communication preferences that would help in designing an online DL programme that facilitates robust interactions as an important element for improving the quality of learning and student satisfaction. Teachers and programme managers also should support incorporating other synchronous tools to facilitate audio-visual interactions such as Skype or Zoom and provide multiple options that can cater for the different communication preferences as well as the medical condition of students who have poor eyesight for example (Section 5.1.3).

Although this study took place before the COVID-19, perhaps in and even beyond the COVID-19, the findings of this study may motivate the Algerian DL programmes to rethink the centrality of audio-visual synchronous meetings and peer-led groups to programme development in an effort to create and sustain learning communities as well as the inclusion of students' views in the design plans to increase students' satisfaction and effectively meet their needs.

Different from the text-based asynchronous discussion forums that the participants of this study experienced on their online platform, the Skype synchronous environment created multidimensional and real-time interactions and provided immediate response allowing different CoI elements to take place. However, the technology such as Skype does not matter as much as the purpose of its use and knowing how to use that technological software or tool. Although providing instructions and illustrations on how to use the different features of Skype in advance, some students who did not attend the welcoming meeting left their microphones open. This implies that illustrations on how to use the tool should be made not only in the beginning but throughout the period of its use. Besides, students' experience with Skype PL would not only help them to exploit the benefits of the synchronous environment and reduce isolation but would also help them integrate such strategy and technology in their teaching. For example, AL-SD sent the researcher a message after the period of data collection informing her that he managed to create a Skype group with his students to help them revise for their final middle school examinations. Although this is less conclusive, yet still encouraging evidence, it can be understood that this experience can be transformed into students' learning and perception of the teaching and learning culture as they become equipped to carry that transformation and change into a broader context.

It was also expected that experience with the Skype technology would help participants to overcome their fear regarding the use of the webcam (Section 5.1.3). However, it was interesting to see that this was applicable in the Applied Linguistics case whereas, the Local Administration case did not show any progress in terms of the number of students using the webcam although the length of their sessions was more than the first case. While some students such as LA-SL

and LA-SS explained that their reasons for not using the webcam had a cultural dimension related to being in a mixed-gender learning environment, others such as LA-SY and LA-SG simply did not prefer using it, perceiving no addition offered by its use. Hence, it was hard to confirm any significant effects of the webcam on perceived learning and sense of community. However, this does not mean that the use of the webcam does not have any importance in synchronous PL. The use of the webcam may have indirect effects on the perceived learning and social presence particularly on the part of the peer facilitators who perceived the lack of visual cues as a barrier to communication. Additionally, the lack of visual cues in the synchronous sessions made it difficult to observe if the participants who remained silent throughout the discussion such as AL-SU and LA-SC were actually present and listening. This particular problem of disengagement with the discussion cannot be confirmed as "lurking" that is also considered to be "an active, participative, and valuable form of online behaviour" (Edelmann, 2013, p.646) because the implementation of synchronous PL in this study included voluntary participation and student's motivation to attend these sessions was not grade-oriented. On the other hand, simply asking students to form PL communities and work on activities of their choice may not assure their engagement in the collaborative interaction. Thus, when applying audio-visual interactions, attention needs to be paid to the design of interactive tasks and comprehension checks to control the attendance of lurking students (Tolu, 2010) and this is especially relevant with the surge of using videoconferencing to support the transition to remote learning and teaching as a consequence of the COVID-19 global pandemic.

8.3 Limitations

Although this study has the potential to inform practice, it should be acknowledged that one of its limits to the extent of generalisability is the sample that is too small and the findings that are not generalizable as well as the limited range of disciplines that are involved in the study. The initial scope is to focus on the students' experiences and perceptions regarding the Skype PL and this, therefore, cannot be generalised however, it is still a limitation as it is considered to be a small-scale study. The low number of volunteers compared to the number of the students enrolled in the two DL programmes might be a potential source of bias. However, having a small sample size created findings that are valuable in that they offered further in-depth understanding of the phenomenon of Skype PL and the development of a collaborative learning community. Besides, to ensure that the sample is representative of the background population, all DL students had an equal chance to be included in the study.

How Skype PL contributes to the process of interaction taking place in the synchronous environment and therefore, to the students' DL experience is what this study attempts to

investigate instead of focusing on the learning outcomes and taking an evaluative approach to the content knowledge. Also, results are unlikely to be replicable with a different group, especially with the presence of the researcher to record the sessions which may also bring the "Hawthorne effect" as the group may behave differently because they know they are expected to. This issue was addressed by observing several times so that participants get used to the researcher's presence. The voluntary role of the peer facilitator, the technical competency and students' capacity to use Skype are also among the variables that are specific to this study and the voluntary aspect of participation in the Skype PL sessions may also cause a "Halo effect" to the research findings in that participants may generalise from one aspect of the PL session to form a favourable view or otherwise of the whole synchronous PL experience. Although all distance students had an equal opportunity to participate, volunteer bias is still a challenge to the validity of the research and thus, it should be acknowledged that the data collected are not representative of all DL students.

Furthermore, the resources used and the collected data were prior to the transition to remote instruction due to the COVID-19 pandemic and this could be a potential inhibitor to this study's transferability and the implementation of findings. On the other hand, what could be a generalisable feature of what this work produces is the proposed model which articulates and refines theoretical constructs pertaining to learning with peers in a real-time audio-visual environment (Section 8.1.6) and which has potential general application.

In short, it is an attempt to rethink the narrative that the construct of effectiveness should include measures of learning outcomes as education is moving gradually towards a dialogic approach to knowledge construction and placing less emphasis on assessment of the knowledge content.

8.4 Recommendations for Future Research

This case study research explores how Skype PL sessions contribute to the online DL experience of the Algerian master's students. The collection of the data focussed on the experiences and perspectives of students participating in the online synchronous PL sessions. Each case study was unique and helped to gain understanding of the dynamics of the peer-based learning community. This research, however, cannot be generalised as the two cases studied are surrounded by unique contextual conditions and therefore, may yield different results when using different approaches to online peer learning or when applied to similar or different DL programmes, academic level, age groups, or socio-cultural backgrounds. The need for research regarding the experiences of various student populations and their perceptions of community building in virtual contexts is particularly relevant as the exposure of younger generations to

learning through online and remote modalities continues to increase especially after the widespread of the COVID-19 pandemic.

It could be argued that audio-visual synchronous PL may not be convenient or suitable for many distance learners as it does not have the element of flexibility; however, more research is still needed to see if embedding this kind of support can work with a larger group. Furthermore, communicating synchronously encourages a shared human encounter through audio-visual options wherein transactional distance could be minimised. Thus, given that asynchronous discussion forums are limited in terms of immediacy and instantaneous interaction, does the application of what has been learned from the cases of this study to the asynchronous discussion forums yield similar results when it comes to the level of interaction and engagement as well as satisfaction with the online learning experience and motivation to learn with peers?

The role of the peer facilitator in this audio/visual synchronous environment calls for further research such as experimenting with the CoI presences and training the peer facilitators to use the CoI presences to direct the sessions or even designing the PL sessions from stem to stern based on the CoI framework and see if it has an impact on engagement and perceived learning. It may also be manageable that the facilitation of the group may be rotated so all the participants may have an equal opportunity to lead the discussion. However, the viability of rotating the roles needs further investigation. Similarly, the role of the teacher in relation to the synchronous PL sessions also needs further investigation as some participants suggested having the teacher on-site to provide light-touch interventions and correct answers or give feedback on the outcomes of the discussion to make sure the information they got is not misleading. This would add an extra work for the teacher who already has limited time available and even increase the level of reliance on the teacher. In such a case, the teacher's contribution could be at the level of the organisation of the session to give additional insights into the importance of synchronous communication in the learning of disciplinary-specific material. Further research into how to maximise the impact of this type of role as well as interaction is required.

With the increased use of the term "decolonising the curriculum" in HE, previous research about PL and its application in synchronous environments was dominant in the western context. Hence, further research in non-western contexts is still needed, although this research provides insight into the interactions of peers in a non-western context and what influences interaction when engaging in PL activities in a synchronous online environment using Skype. Additionally, using Skype in this study was based on students' familiarity with this software and ease of use, it would be interesting to look at differences in interactions in a synchronous PL environment

using different software and whether this also have an effect on students' engagement, motivation, and satisfaction with the PL strategy.

Considering the motivation to complete the programme was mentioned by students as one of the reasons to engage in synchronous PL, there is still the need for further research to rethink the causes behind students' withdrawal and whether the use of synchronous PL can help minimising students' attrition in DL programmes.

8.5 Final Reflections

Despite the fact that research shows the importance of peer interaction and community in DL, and online learners express a desire to feel a sense of community in DL courses (Akyol et al, 2011), there is a gap in the literature that qualitatively details the experience of peer interaction and online learners' perceptions of building a learning community. This qualitative research therefore contributes to a deeper understanding of what shapes PL and interaction in a DL context. It specifically focusses on developing an understanding of the interactions taking place between peers in an audio-visual synchronous environment and exploring students' perceptions of the value of this experience and how it contributes to their DL experience. As a result, the overall findings of this study show that this experience contributed to the students' sense of community as well as to their perceived learning of the content discussed. However, while learners value learner-learner interaction, the type and mode of interaction and even the tool utilised are less significant than confirming understanding and ensuring that the learning goals are achieved.

Furthermore, students who study at a distance may often feel isolated and overwhelmed as they have to balance between work, family responsibilities, and the requirements of the DL programme they are involved in. Students especially find it difficult to maintain motivation not only to complete the academic activities but to complete the whole programme when they have less opportunities for experiencing different types and modes of interaction. Providing only text-based static content that is less humanised and not supported by multimedia presentations is not always satisfactory as they do not allow verbalising thoughts and confirming understanding. Asynchronous discussion forums can provide the aforementioned opportunities but they lack the immediacy required to engage in deep conversations and quickly clarify any ambiguities. Providing distance students with the opportunity to interact with the content in an online synchronous session while being supported in real time by their peers could give the motivation they need to stay engaged with the content and the programme as a whole.

Developing a community in which students facilitated the learning of each other and showed growing confidence about the Skype PL environment didn't take much time as it was clear that students were motivated to collaboratively revise for the exams and became less hesitant to ask questions (Section 5.2.3).

It should be mentioned that technology's affordances may either dehumanise DE due to the availability of digital resources to distance students to exploit, or they can cause losing interest in developing relationships to create engaging and collaborative learning environments. However, this research challenged the idea that adult learners don't need or desire peer interaction to remain motivated and engaged in their DL endeavours (Section 3.1.1) and demonstrated that using audio/ video synchronous communication has the potential to humanise the DL experience of learners and since there are students who are willing to dedicate one hour per week to engage in what they described as personal and purposeful interaction with peers in a synchronous environment (Section 5.2.2), it is critical to focus more on student-led opportunities to enhance their learning experience as diverse student groups become more exposed to learning via distance, online, and remote modes, especially after the COVID-19 global pandemic.

Appendices

Appendix A: Initial interview with students

1) (the name of the programme) is your current DL programme, right? Before joining this master's DL programme, have you ever experienced studying online or at distance and how many years did you spend away from education before enrolling in this master's DL programme?

1) (اسم الدورة التدريبية) هي دورة التعلم عن بعد الحالية، أليس كذلك؟ قبل الانضمام إلى برنامج الماجستير في التعلم عن بعد ، هل سبق لك أن جربت الدراسة عبر الإنترنت أو عن بعد وكم عدد السنوات التي أمضيتها بعيدًا عن التعليم قبل التسجيل في برنامج الماجستير عن بعد؟

2) Besides your current DL course, are you taking another online course or attending regular lectures? If yes, what is it?

2) بالإضافة إلى دورة التعلم عن بعد الحالية ، هل تأخذ دورة أخرى عبر الإنترنت أو تحضر محاضرات منتظمة؟ إذا كانت الإجابة بنعم، ما هو؟

3) What are the factors or circumstances that led you to enrol in a DL course instead of attending regular lectures?

3) ما هي العوامل أو الظروف التي دفعتك إلى الالتحاق بدورة التعلم عن بعد بدلاً من حضور المحاضرات العادية؟

4) Since the masters' DL programme is new in Algeria, how did you expect studying at distance would be? and how did you find it in reality?

4) بما أن برنامج الماجستير عن بعد جديد في الجزائر ، كيف تتوقع أن تكون الدراسة عن بعد؟ وكيف وجدته في الواقع؟

- What are the positive and negative aspects of studying at distance?

5) Is the online platform the only interface that you use to receive lessons, assessments, messages and notifications? What are your comments about the online platform?

5) هل النظام الأساسي عبر الإنترنت هو الواجهة الوحيدة التي تستخدمها لتلقي الدروس والتقييمات والرسائل والإشعارات؟ ما هي تعليقاتك على المنصة الالكترونية؟

- The presented content on the platform,

المحتوى المعروض على المنصة

- The students' discussion forum,

منتدى مناقشة الطلاب

- The teacher's presence on the platform?

حضور المعلم على المنصة؟

6) How do you prefer to take your course?

6) كيف تفضل أن تأخذ دورتك؟

- in a written format,
- in an audio/ visual format (e.g. video conferences),
- or a blended format (e.g. both text-based and video conferencing)? Why or why not?

7) If there are audio or video features of communication on the platform, how do you think your learning will be affected?

7) إذا كانت هناك ميزات صوتية أو مرئية للاتصال على المنصة ، فكيف تعتقد أن تعلمك سيتأثر؟

8) How familiar are you with Skype? How often and for what purposes do you use it? Do you use text-message, audio or video conferencing? Why?

8) ما مدى معرفتك بسكايب كم مرة ولأي غرض تستخدمه؟ هل تستخدم الرسائل النصية أو الصوت أو الفيديو؟ لماذا ا؟

- Why didn't you think about using Skype for learning purposes before?

9) What advantages do you think Skype or other similar software may offer to distance learners?

9) ما هي المزايا التي تعتقد أن سكايب أو أي برنامج مشابه قد يقدمه للمتعلمين عن بعد؟

10) What concerns might you have regarding the use of a software like Skype to study at a distance?

10) ما هي المخاوف التي قد تكون لديك بشأن استخدام برنامج مثل سكايب للدراسة عن بعد؟

- Do you need any training regarding the use of Skype?

11) What do you think about using the webcam for the purpose of studying at a distance?

11) ما رأيك في استخدام كاميرا الويب بغرض الدراسة عن بعد؟

- Are you ready to expose yourself and use the webcam? Why?

12) During your DL experience, have you experienced the feeling of isolation/ or engagement in a community? Please give an example

١٢) أثناء تجربة التعلم عن بعد ، هل شعرت بالعزلة / أو الانخراط في المجتمع؟ الرجاء إعطاء مثال

13) How is the interaction among students and between the student and the teacher?

١٣) كيف يتم التفاعل بين الطلاب وبين الطالب والمعلم؟

14) Where do you look for support? What did you usually do to solve or understand cognitively challenging aspects? (what tools and strategies did you use)

١٤) أين تبحث عن الدعم؟ ماذا كنت تفعل عادة لحل أو فهم الجوانب المعرفية الصعبة؟ (ما هي الأدوات والاستراتيجيات التي استخدمتها)

15) Are you taking any form of learning with any of your peers together?

١٥) هل تتخذ أي شكل من أشكال التعلم مع أي من زملائك معًا؟

- Do you study in groups with your friends?
- Please explain how you formed your group and why?
- What aspects do you discuss with your peers?
- What is your objective of being a member of that group?
- What software did you use to communicate with your peers?

16) How do you interact with each other (using only writing, audio form of communication or visual communication using videos)?

١٦) كيف تتفاعلون مع بعضكم البعض (باستخدام الكتابة فقط أو شكل الاتصال الصوتي أو الاتصال المرئي باستخدام مقاطع الفيديو)؟

- Why this particular form of communication?

- Do you have any experience of communicating verbally with your peers?

17) What are the challenges that you encountered while working with your peers?

١٧) ما هي التحديات التي واجهتها أثناء العمل مع زملائك؟

- Do you think that these challenges will also occur during verbal communication? and how do you think they can be overcome?

18) What if a discussion is facilitated by a student who is in your same level instead of a teacher, do you think that it would be the same? Please explain your view

18) ماذا لو تم تسهيل المناقشة من قبل طالب في نفس مستواك بدلاً من المعلم ، هل تعتقد أنه سيكون هو نفسه؟ يرجى شرح وجهة نظرك

19) How do you imagine this discussion would be?

19) كيف تتخيل هذه المناقشة ستكون؟

- Do you think it would be the same as the other discussions that you used to have? Please explain your view

20) What is your motive to join the Skype discussion group?

20) ما هو دافعك للانضمام إلى مجموعة مناقشة سكايب؟

- What makes you accept being involved in the Skype peer learning experience?

21) What advantages and disadvantages/ risks do you think might be associated with learning with peers using Skype?

21) ما هي المزايا والعيوب / المخاطر التي تعتقد أنها قد ترتبط بالتعلم مع الأقران باستخدام سكايب؟

22) Is there anything else you would like to say or add?

22) هل هناك أي شيء آخر تود أن تقوله أو تضيفه؟

Appendix B: Students' reflective log

Dear student,

Thank you for agreeing to write this Reflective Log for my research. I am aware that writing a Reflective Log takes time and effort, but please specify some of your time and write in your Reflective Log about your experience as a peer learner after each session.

شكرا لموافقتك على كتابة هذا السجل الانعكاسي لبحثي. إنني أدرك أن كتابة سجل انعكاسي يستغرق وقتًا وجهدًا ، ولكن من فضلك حدد بعض من وقتك واكتب في السجل الانعكاسي الخاص بك عن تجربتك كمتعلم مع الأقران بعد كل جلسة.

This is so helpful for me to know how your session was, and what you think you might add or avoid in the next session. I suggest writing in your Reflective Log towards the end of each session. It does not matter if you were too busy or forget about it, it' s okay to catch-up with your Reflective Log whenever you like but preferably as close to when the session took place as possible and before the date of the next session just to avoid confusion.

هذا مفيد جدًا بالنسبة لي لمعرفة كيف كانت جلستك ، وما تعتقد أنه يمكنك إضافته أو تجنبه في الجلسة التالية. أقترح الكتابة في السجل الانعكاسي الخاص بك وقتما تشاء. في نهاية كل جلسة. لا يهم ما إذا كنت مشغولاً للغاية أو نسيت أمره ، فلا بأس من اللحاق بالسجل ولكن يفضل أن يكون قريبًا من وقت انعقاد الجلسة قدر الإمكان وقبل تاريخ الجلسة التالية فقط لتجنب الالتباس

What I am interested in is a record of your personal learning experience as a peer learner in an online environment, what do you think about each session and how it may affect you as a distance learner yourself. This includes both things that you have experienced and that you witnessed the others experiencing.

ما يهمني هو تسجيل تجربة التعلم الشخصية الخاصة بك كمتعلم من الأقران في بيئة عبر الإنترنت ، ما رأيك في كل جلسة وكيف يمكن أن تؤثر عليك كمتعلم عن بعد بنفسك. يتضمن هذا كلًا من الأشياء التي مررت بها والتي شاهدتها من قبل الآخرين.

Please can you try and fill in the following details about each session:

برجاء محاولة ملء التفاصيل التالية حول كل جلسة

1. How did you feel communicating verbally with your peers in a synchronous learning environment?

1. كيف شعرت بالتواصل الشفهي مع زملائك في بيئة تعلم متزامنة؟

………………………………………………………………………….

2. How did the past peer learning Skype session affect?

<div dir="rtl">

2. كيف أثرت جلسة سكايب السابقة لتعلم الأقران؟

</div>

Your learning and understanding of the content

<div dir="rtl">

تعلمك وفهمك للمحتوى

</div>

…………………………………………………………………………………………

Your ability to construct meaning through sustained communication

<div dir="rtl">

قدرتك على بناء المعنى من خلال التواصل المستمر

</div>

…………………………………………………………………………………………

Your ability to express yourself freely and collaborate with others

<div dir="rtl">

قدرتك على التعبير عن نفسك بحرية والتعاون مع الآخرين

</div>

………………………………………………………………………………………….

Your emotional and social projection of yourself

<div dir="rtl">

إسقاطك العاطفي والاجتماعي لنفسك

</div>

…………………………………………………………………………………………..

Your sense of belongingness to a learning community

<div dir="rtl">

إحساسك بالانتماء إلى مجتمع التعلم

</div>

…………………………………………………………………………………………..

Your ability to facilitate the learning of others

<div dir="rtl">

قدرتك على تسهيل تعلم الآخرين

</div>

…………………………………………………………………………………………..

Overall satisfaction and motivation to attend the next session

الرضا العام والتحفيز لحضور الجلسة القادمة

…………………………………………………………………………………..

3. Describe what happened during the session and how the verbal peer learning strategy looks like in your session?

صف ما حدث أثناء الجلسة وكيف تبدو استراتيجية التعلم اللفظي من الأقران في جلستك؟

…………………………………………………………………………………

If you encountered an incident (positive or negative or both) during the session, can you please describe it/them? and how did you respond to it/them? (e.g. collaboration, good facilitation practice, disagreement, technical problem, not enough time etc.)

إذا واجهت حادثة (إيجابية أو سلبية أو كليهما) أثناء الجلسة ، هل يمكنك وصفها / وصفها / عليها / عليهم؟ على سبيل المثال ، التعاون ، ممارسة التيسير الجيدة ، الخلاف ، المشكلة الفنية ، عدم كفاية الوقت ، إلخ

…………………………………………………………………………………..

4. How do you describe the process of your discussion? And do you think you reached a common conclusion? (Please explain why)?

كيف تصف عملية مناقشتك؟ وهل تعتقد أنك توصلت إلى نتيجة مشتركة؟ (اشرح لماذا)؟

…………………………………………………………………………………..

5.What were the outcomes of today's discussion? Are they what you expected to get out of the discussion? If not, what did you expect and didn't go well? And why it didn't go well

ما هي نتائج مناقشة اليوم؟ هل هم ما توقعت الخروج من المناقشة؟ إذا لم يكن الأمر كذلك ، فماذا كنت تتوقع ولم تسر على ما يرام؟ ولماذا لم تسر الأمور على ما يرام

…………………………………………………………………………………

6. What are your comments on your interaction with the peer facilitator?

ما هي تعليقاتك على تفاعلك مع الميسر الأقران؟

…………………………………………………………………………………..

With other students?

مع طلاب آخرين؟

………………………………………………………………………………….

And with the content of the discussion?

ومع مضمون المناقشة؟

………………………………………………………………………………….

7. How did you contribute to the discussion and what strategies or techniques did you learn or use yourself?

كيف ساهمت في المناقشة وما هي الاستراتيجيات أو التقنيات التي تعلمتها أو استخدمتها بنفسك؟

…………………………………………………………………………………

How did students respond to your thoughts, clarifications and feedback?

كيف استجاب الطلاب لأفكارك وتوضيحاتك وملاحظاتك؟

…………………………………………………………………………………..

Did you get any feedback or clarifications from your peers or the peer facilitator? If yes, how did you respond to it/them?

هل حصلت على أي ملاحظات أو توضيحات من زملائك أو الميسر الأقران؟ إذا كانت الإجابة بنعم ، فكيف كان ردك عليها / عليهم؟

…………………………………………………………………………………..

And did Skype help you in doing this?

وهل ساعدك سكايب في فعل هذا؟

………………………………………………………………………………….

8. What do you think about your performance in the last session? And why was it like that?

ما رأيك في أدائك في الجلسة الماضية؟ ولماذا كان على هذا النحو؟

………………………………………………………………………………….

9. Did you feel that you were interacting effectively and comfortably with other students and that you have established a community of learning by now? Please explain why

هل شعرت أنك تتفاعل بشكل فعال ومريح مع الطلاب الآخرين وأنك أنشأت مجتمعًا للتعلم الآن؟ يرجى توضيح السبب

…………………………………………………………………………………

10. What did you benefit from this session?

ماذا استفدت من هذه الدورة؟

…………………………………………………………………………………

And did this session make a difference in your learning? Do you feel any change in your knowledge about the discussed topic or it didn't add anything new? Please explain How

وهل أحدثت هذه الجلسة فرقًا في تعلمك؟ هل تشعر بأي تغيير في معرفتك بالموضوع الذي تمت مناقشته أم أنه لم يضيف شيئًا جديدًا؟ يرجى شرح كيف

………………………………………………………………………………..

11. What were the challenges that you encountered in this session?

ما هي التحديات التي واجهتك في هذه الجلسة؟

…………………………………………………………………………………

And how do you think they could be fixed?

وكيف تعتقد أنه يمكن إصلاحها؟

………………………………………………………………………………..

12. How do you evaluate the overall effectiveness of your verbal peer learning session? Please explain why?

كيف تقيم الفعالية الكلية لجلسة التعلم اللفظي للأقران؟ من فضلك اشرح لماذا؟

…………………………………………………………………………………

13. What are you planning to do differently in your next session?

ما الذي تخطط للقيام به بشكل مختلف في جلستك القادمة؟

……………………………………………………………………………………….

14. Any other lessons learned?

أي دروس أخرى مستفادة؟

Please write in full sentences if possible, and please feel free to add anything you want. Please after completing the Reflective Log, return it either via Skype or email it to me na991@york.ac.uk or alem.nihad5@gmail.com at any time. If you have any questions, additions or queries please don't hesitate to ask as your understanding and perspectives are what most matter.

Thank you!

يرجى كتابة جمل كاملة إن أمكن ، ولا تتردد في إضافة أي شيء تريده. من فضلك بعد الانتهاء من سجل الانعكاس ، قم بإعادته إما عبر سكايب أو إرساله إليّ عبر البريد الإلكتروني na991@york.ac.uk أو alem.nihad5@gmail.com في أي وقت. إذا كانت لديك أي أسئلة أو إضافات أو استفسارات ، فلا تتردد في طرحها لأن فهمك ووجهات نظرك هما الأكثر أهمية

!شكرًا لك

Appendix C: Peer facilitators' reflective log

Dear peer facilitator,

Thank you for agreeing to write this Reflective Log for my research. I am aware that writing a Reflective Log takes time and effort, but please specify some of your time and write in your Reflective Log about your experience as a peer facilitator after each facilitation session.

شكرا لموافقتك على كتابة هذا السجل التأملي لبحثي. أدرك أن كتابة السجل التأملي يستغرق وقتًا وجهدًا ، ولكن من فضلك حدد بعضًا من وقتك واكتب في السجل الانعكاسي الخاص بك عن تجربتك كميسر نظير بعد كل جلسة تيسير.

This is so helpful for me to know how your facilitated session was, and what you think you might add or avoid in the next session. I suggest writing in your Reflective Log towards the end of each session. It does not matter if you were too busy or forget about it, it' s okay to catch-up with your Reflective Log whenever you like but preferably as close to when the session took place as possible and before the date of the next session just to avoid confusion.

هذا مفيد جدًا بالنسبة لي لمعرفة كيف كانت جلستك ، وما تعتقد أنه يمكنك إضافته أو تجنبه في الجلسة التالية. أقترح الكتابة في السجل الخاص بك في نهاية كل جلسة. لا يهم ما إذا كنت مشغولاً للغاية أو. نسيت أمره ، فلا بأس من اللحاق بالسجل الانعكاسي الخاص بك وقتما تشاء ولكن يفضل أن يكون قريبًا من وقت انعقاد الجلسة قدر الإمكان وقبل تاريخ الجلسة التالية فقط لتجنب الالتباس

What I am interested about is a record of your personal learning experience as a peer facilitator in an online environment, what do you think about each session and how it may affect you as a distance learner yourself. This includes both things that you have experienced and that you witnessed the others experiencing.

ما يهمني هو تسجيل تجربة التعلم الشخصية الخاصة بك كمتعلم من الأقران في بيئة عبر الإنترنت ، ما رأيك في كل جلسة وكيف يمكن أن تؤثر عليك كمتعلم عن بعد بنفسك. يتضمن هذا كلًا من الأشياء التي مررت بها والتي شاهدتها من قبل الآخرين

Please can you try and fill in the following details about each session:

برجاء محاولة ملء التفاصيل التالية حول كل جلسة

1. How did you feel as a peer facilitator communicating verbally with your peers in a synchronous learning environment?

كيف شعرت كميسر من الأقران يتواصل شفهيًا مع أقرانك في بيئة تعليمية متزامنة؟

……………………………………………………………………………….

2. How did the past peer learning Skype session affect?

كيف أثرت جلسة سكايب السابقة لتعلم الأقران؟

Your learning and understanding of the content

تعلمك وفهمك للمحتوى

…………………………………………………………………………………

Your ability to construct meaning through sustained communication

قدرتك على بناء المعنى من خلال التواصل المستمر

…………………………………………………………………………………

Your ability to express yourself freely and collaborate with others

قدرتك على التعبير عن نفسك بحرية والتعاون مع الآخرين

………………………………………………………………………………….

Your emotional and social projection of yourself

إسقاطك العاطفي والاجتماعي لنفسك

…………………………………………………………………………………..

Your sense of belongingness to a learning community?

إحساسك بالانتماء إلى مجتمع التعلم

…………………………………………………………………………………..

Your ability to facilitate the learning of others

قدرتك على تسهيل تعلم الآخرين

…………………………………………………………………………………..

Overall satisfaction and motivation to attend the next session

الرضا العام والتحفيز لحضور الجلسة القادمة

…………………………………………………………………………………..

3. Describe what happened during the session and how the verbal peer learning strategy looks like in your session?

صف ما حدث أثناء الجلسة وكيف تبدو استراتيجية التعلم اللفظي من الأقران في جلستك؟

…………………………………………………………………………………

If you encountered an incident (positive or negative or both) during the session, can you please describe it/them? and how did you respond to it/them? (e.g., collaboration, good facilitation practice, disagreement, technical problem, not enough time etc.)

إذا واجهت حادثة (إيجابية أو سلبية أو كليهما) أثناء الجلسة ، هل يمكنك وصفها / وصفها / عليها / عليهم؟ على سبيل وكيف كان ردك عليها / عليهم؟ على سبيل المثال ، التعاون ، ممارسة التيسير الجيدة ، الخلاف ، المشكلة الفنية ، عدم كفاية الوقت ، إلخ

…………………………………………………………………………………..

4. How do you describe the process of your discussion? And do you think you reached a common conclusion? (please explain why)?

كيف تصف عملية مناقشتك؟ وهل تعتقد أنك توصلت إلى نتيجة مشتركة؟ (اشرح لماذا) ؟

…………………………………………………………………………………..

5.What were the outcomes of today' s discussion? Are they what you expected to get out of the discussion? If not, what did you expect and didn't go well? And why it didn't go well

ما هي نتائج مناقشة اليوم؟ هل هم ما توقعت الخروج من المناقشة؟ إذا لم يكن الأمر كذلك ، فماذا كنت تتوقع ولم تسر على ما يرام؟ ولماذا لم تسر الأمور على ما يرام

…………………………………………………………………………………

6. What are your comments on your peers' interaction with you?

ما هي تعليقاتك على تفاعل زملائك معك؟

…………………………………………………………………………………..

With each other?

مع بعض؟

……………………………………………………………………………………………….

And with the content of the discussion?

ومع مضمون المناقشة؟

……………………………………………………………………………………………….

7. How did you contribute to the discussion and what strategies or techniques did you learn or use yourself?

كيف ساهمت في المناقشة وما هي الاستراتيجيات أو التقنيات التي تعلمتها أو استخدمتها بنفسك؟

……………………………………………………………………………………………

How did students respond to your thoughts, clarifications and feedback?

كيف استجاب الطلاب لأفكارك وتوضيحاتك وملاحظاتك؟

…………………………………………………………………………………………..

Did you get any feedback or clarifications from your peers or the peer facilitator? If yes, how did you respond to it/them?

هل حصلت على أي ملاحظات أو توضيحات من زملائك أو الميسر الأقران؟ إذا كانت الإجابة بنعم ، فكيف كان ردك عليها / عليهم؟

…………………………………………………………………………………………..

And did Skype help you in doing this?

وهل ساعدك سكايب في فعل هذا؟

……………………………………………………………………………………………

8. What do you think about your performance in the last session? And why was it like that?

ما رأيك في أدائك في الجلسة الماضية؟ ولماذا كان على هذا النحو؟

……………………………………………………………………………………………

9. Did you feel that you were interacting effectively and comfortably with other students and that you have established a community of learning by now? Please explain why

هل شعرت أنك تتفاعل بشكل فعال ومريح مع الطلاب الآخرين وأنك أنشأت مجتمعًا للتعلم الآن؟ يرجى توضيح السبب

…………………………………………………………………………………………

10. What did you benefit from this session?

ماذا استفدت من هذه الدورة؟

…………………………………………………………………………………………

And did this session make a difference in your learning? Do you feel any change in your knowledge about the discussed topic or it didn't add anything new? Please explain How

وهل أحدثت هذه الجلسة فرقًا في تعلمك؟ هل تشعر بأي تغيير في معرفتك بالموضوع الذي تمت مناقشته أم أنه لم يضيف شيئًا جديدًا؟ يرجى شرح كيف

…………………………………………………………………………………………

11. What were the challenges that you encountered in this session?

ما هي التحديات التي واجهتك في هذه الجلسة؟

…………………………………………………………………………………………

And how do you think they could be fixed?

وكيف تعتقد أنه يمكن إصلاحها؟

…………………………………………………………………………………………

12. How do you evaluate the overall effectiveness of your verbal peer learning session? Please explain why?

كيف تقيم الفعالية الكلية لجلسة التعلم اللفظي للأقران؟ من فضلك اشرح لماذا؟

…………………………………………………………………………………………

13. What are you planning to do differently in your next session?

ما الذي تخطط للقيام به بشكل مختلف في جلستك القادمة؟

………………………………………………………………………………….

14. Any other lessons learned?

أي دروس أخرى مستفادة؟

Please write in full sentences if possible, and please feel free to add anything you want. Please after completing the Reflective Log, return it either via Skype or email it to me na991@york.ac.uk or alem.nihad5@gmail.com at any time. If you have any questions, additions or queries please don't hesitate to ask as your understanding and perspectives are what most matter.

Thank you!

يرجى كتابة جمل كاملة إن أمكن ، ولا تتردد في إضافة أي شيء تريده. يرجى بعد إكمال السجل الانعكاسي ، إعادته إما عبر سكايب أو في أي وقت. إذا كانت لديك أي أسئلة أو alem.nihad5@gmail.com أو na991@york.ac.uk إرساله بالبريد الإلكتروني لي إضافات أو استفسارات ، فلا تتردد في طرحها لأن فهمك ووجهات نظرك هما الأكثر أهمية.

!شكرًا لك

Appendix D: Final interview with students

1) Over a period of time, you participated in several peer learning sessions delivered through Skype. Can you tell me what motivated you to take part in these sessions?

1) على مدار فترة زمنية ، شاركت في العديد من جلسات التعلم من الأقران التي تم تقديمها عبر سكايب. هل يمكن أن تخبرني ما الذي دفعك للمشاركة في هذه الجلسات؟

- Have you ever thought about dropping out? Why?

2) How do you describe your experience participating in these online sessions facilitated by a peer leader?

2) كيف تصف تجربتك في المشاركة في هذه الجلسات عبر الإنترنت التي ييسرها زعيم نظير؟

- How did you feel when you started your first session and how do you feel now after finishing the sessions?
- And do you think that you had enough time to see your community develop?

3) Did these sessions meet your expectations and contribute to your learning practice and DL experience? If not, what did you expect from these sessions?

3) هل استوفت هذه الجلسات توقعاتك وساهمت في ممارسة التعلم وتجربة التعلم عن بعد؟ إذا لم يكن كذلك ، فماذا كنت تتوقع من هذه الجلسات؟

- Was studying related topics to your programme with your peers fruitful or the same as when studying them alone? Why?

4) What do you think were the best aspects of your peer learning experience that worked well and what didn't work well and why? (the challenges that you were confronted with)

4) ما هي في رأيك أفضل جوانب تجربة التعلم من الأقران التي نجحت بشكل جيد وما الذي لم يعمل جيدًا ولماذا؟ (التحديات التي واجهتك)

5) After having these Skype sessions with your peers, how was your experience of using Skype to communicate with your peers?

5) بعد إجراء جلسات سكايب هذه مع زملائك ، كيف كانت تجربتك في استخدام سكايب للتواصل مع زملائك؟

- What do you think about the use of the webcam in these sessions?

- I have noticed that you didn't use the webcam, can you explain why?

6) Do you feel more confident about the audio/visual interaction and how this is different from your previous interactions in the DL programme?

6) هل تشعر بثقة أكبر بشأن التفاعل الصوتي / المرئي وكيف يختلف ذلك عن تفاعلاتك السابقة في برنامج التعلم عن بعد؟

7) After this experience, do you think the discussed debates were effectively resolved and you were able to reach a common solution? Why?

7) بعد هذه التجربة ، هل تعتقد أن المناقشات التي تمت مناقشتها قد تم حلها بشكل فعال وتمكنت من الوصول إلى حل مشترك؟ لماذا ؟

8) Have you had the chance to apply what you learned in the sessions? And what is your experience in doing that (give an example)?

8) هل سنحت لك الفرصة لتطبيق ما تعلمته في الجلسات؟ وما هي خبرتك في القيام بذلك (أعط مثالاً)؟

9) Can you comment on your participation in these discussions and what factors influenced your participation?

9) هل يمكنك التعليق على مشاركتك في هذه المناقشات وما هي العوامل التي أثرت في مشاركتك؟

- I have noticed that you didn't take much part in the online discussion, can you explain why? Is it because you don't know the other participants, the nature of the topic or something else (e.g. not given the space to express yourself freely)?

10) How did you feel about being guided by a peer facilitator instead of an instructor? In which situation did you think that the peer facilitator is more effective than the instructor? And when did you feel that the discussion should be handled by the instructor and not the peer facilitator?

10) ما هو شعورك حيال الاسترشاد بميسر نظير بدلاً من مدرب؟ في أي موقف تعتقد أن ميسّر الأقران أكثر فعالية من المدرب؟ ومتى شعرت أن المناقشة يجب أن تتم من قبل المدرب وليس الميسر الأقران؟

11) Should the audio/visual peer facilitation be part of your regular DL programme? Please explain your view(s)

11) هل ينبغي أن يكون تيسير الأقران السمعي / المرئي جزءًا من برنامج التعلم عن بعد المعتاد؟ يرجى توضيح وجهة نظرك (وجهات نظرك)

- When do you think it is important to use peer learning and when do you think that this method is not necessary? Why?

12) Did you have the chance to meet with your peer group after the last six sessions? Do you still want to meet up with your peers and discuss similar topics? If you are unable to experience the peer learning sessions again, could you please say why? Do you recommend these sessions to other distance learners? Why?

12) هل سنحت لك الفرصة للقاء مجموعة زملائك بعد الجلسات الست الماضية؟ هل ما زلت ترغب في مقابلة زملائك ومناقشة مواضيع مماثلة؟ إذا كنت غير قادر على تجربة جلسات التعلم من الأقران مرة أخرى ، فهل يمكنك أن توضح السبب من فضلك؟ هل تنصح بهذه الجلسات للمتعلمين الآخرين عن بعد؟ لماذا ا؟

13) In what way do you think this experience could be improved? (what would benefit you more in your learning and who would benefit more from this strategy)? Would you recommend any changes to the peer learning sessions?

13) بأي طريقة تعتقد أنه يمكن تحسين هذه التجربة؟ (ما الذي سيفيدك أكثر في تعلمك ومن الذي سيستفيد أكثر من هذه الإستراتيجية)؟ هل تنصح بأي تغييرات على جلسات التعلم من الأقران؟

14) Any recommendations on how the peer learning can be used in your DL programme? And what advice do you pass to the faculty members to design and plan similar experiences?

14) أي توصيات حول كيفية استخدام التعلم من الأقران في برنامج التعلم عن بعد الخاص بك؟ وما هي نصيحتك لأعضاء هيئة التدريس لتصميم وتخطيط تجارب مماثلة؟

15) Is there anything else you'd like to comment on/ or add?

15) هل هناك أي شيء آخر تود التعليق عليه / أو إضافته؟

Appendix E: Interview with teachers

1) Can you express how you feel about teaching online in a DE programme?

1) هل يمكنك قول بضع كلمات تعبر عن شعورك حيال التدريس عبر الإنترنت في برنامج التعليم عن بعد؟

2) Can you describe your interaction experience with the students; for example, facilitating a discussion group in the MOODLE online platform? (Challenges and coping strategies)

2) هل يمكنك وصف تجربة تفاعلك مع الطلاب؟ على سبيل المثال ، تيسير مجموعة نقاش في منصة موودل على الإنترنت؟ (التحديات واستراتيجيات المواجهة)

3) What community-building experience did you have in your DL programme?

3) ما هي تجربة بناء المجتمع التي حصلت عليها في برنامج التعلم عن بعد الخاص بك؟

A. Have you ever interacted online with other teachers and/ or students where all of you were connected at the same time and participated in real-time discussion?

أ. هل سبق لك أن تفاعلت عبر الإنترنت مع مدرسين و / أو طلاب آخرين حيث كنتم متصلين في نفس الوقت وشاركتم في مناقشة في الوقت الفعلي؟

B. If so, what was the nature of the conversation (social and/ or academic), who was involved (a group of students and a teacher, teacher and student or teacher and teacher), and what software was used?

ب. إذا كان الأمر كذلك ، فما هي طبيعة المحادثة (الاجتماعية و / أو الأكاديمية) ، ومن شارك (مجموعة من الطلاب ومعلم ، ومعلم وطالب أو مدرس ومعلم) ، وما هي البرامج المستخدمة؟

4) Which medium did you prefer for communication, the discussion forum or other software and what were the benefits and drawbacks of this medium?

4) ما هي الوسيلة التي تفضلها للتواصل, منتدى المناقشة أو البرامج الأخرى وما هي مزايا وعيوب هذه الوسيلة؟

5) Did you interact with students outside the online platform? If you didn't, would you have liked to?

5) هل تفاعلت مع الطلاب خارج النظام الأساسي عبر الإنترنت؟ إذا لم تكن قد فعلت ذلك ، فهل كنت ترغب في ذلك؟

6) Would you like to have a synchronous audio-visual conversation for example via Skype in any future courses that you teach? Why? How do you think students would respond to this idea?

هل ترغب في إجراء محادثة صوتية ومرئية متزامنة على سبيل المثال عبر سكايب في أي دورات مستقبلية تقوم بتدريسها؟ لماذا ا؟ كيف تعتقد أن الطلاب سيستجيبون لهذه الفكرة؟

7) After having the initiative of peer learning via Skype, how do you think these sessions went? (Key expectations and concerns)

بعد الحصول على مبادرة التعلم من الأقران عبر سكايب ، كيف سارت هذه الجلسات برأيك؟ (التوقعات والاهتمامات الرئيسية)

8) Do you think that these sessions could have not been effective if they proceeded without the teacher being present? Explain why?

8) هل تعتقد أن هذه الجلسات ما كانت لتكون فعالة إذا استمرت بدون حضور المعلم؟ اشرح السبب؟

9) To what extent do you think that this strategy can work in the Algerian DL programme and what factors and conditions do you think should be in place for an effective real-time peer learning strategy?

9) إلى أي مدى تعتقد أن هذه الاستراتيجية يمكن أن تنجح في برنامج التعلم عن بعد الجزائري وما هي العوامل والظروف التي تعتقد أنه يجب أن تكون في مكانها لاستراتيجية فعالة للتعلم من الأقران في الوقت الفعلي؟

10) What do you think about the role of the university in enhancing this strategy?

10) ما رأيك في دور الجامعة في تعزيز هذه الاستراتيجية؟

11) Is there something important about managing online learning communities for distance education that you remember but we may have not discussed?

11) هل تتذكر شيئًا مهمًا في إدارة مجتمعات التعلم عبر الإنترنت للتعليم عن بعد ولكننا ربما لم نتعامل معه؟

Appendix F: Summary of Data Collection Process

When	Procedures	Outcomes
From July 10, 2019 to July 15, 2019	Recruiting participants and conducting pilot interviews with five students	Evaluating and getting suggestions regarding the comprehensibility, clarity and accuracy of the interview questions.
From July 19, 2019 to July 29, 2019	Recruiting participants and conducting initial interviews with twenty-six students	Gaining insight into students' experience of interaction in the DL programme and readiness for Skype PL.
From August 2, 2019 to September 28, 2019	Conducting weekly Skype PL sessions and administering reflective logs	Gaining insight into students' experience of interaction in the Skype PL sessions and examining the CoI elements.
From October 10, 2019 to October 20, 2019	Conducting final interviews with twelve students	Understanding the perceptions of students about the Skype PL sessions.
From April 02, 2021 to April 28, 2021	Conducting interviews with seven teachers	Understanding the experience of interaction in the DL programme and perceptions about Skype PL.

Appendix G: Community of Inquiry Coding Template

Categories constituting the criteria for inclusion in the three CoI presences (adapted from Garrison & Arbaugh, 2007, p. 158).

Elements	Categories	Indicators
Social Presence	Open communication	Risk-free expression
	Group cohesion	Encourage collaboration
	Effective expression	Emotions
Cognitive Presence	Triggering event	Sense of puzzlement
	Exploration	Information exchange
	Integration	Connecting ideas
	Resolution	Apply new ideas
Teaching Presence	Design and organisation	Setting curriculum and methods
	Facilitating discourse	Sharing personal meaning
	Direct instruction	Focussing discussion

Appendix H: Permission to use CoI and types of interaction models

Nihad Alem <na991@york.ac.uk>   5 October 2021 at 20:46
To: terrya@athabascau.ca

Greetings,

Hope this finds you well

I am Nihad Alem, a PhD student at the University of York and my research is about Peer interaction and Online learning communities.

I am writing this email to ask your permission to reproduce and adapt your model of online learning showing types of interaction (Anderson, 2008) as well as the Community of Inquiry framework and use them in my PhD thesis.

If you need any further information, please don't hesitate to contact me.

Thank you and looking forward to hearing from you.

Kind regards,
Nihad

Terry Anderson <terrydanderson2@gmail.com>   7 October 2021 at 17:32
To: Nihad Alem <na991@york.ac.uk>

Hi Nihad
Please feel free to use these diagrams (with attribution).
Good luck in your studies.
Terry

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Appendix I: The approach of coding data and the emerged themes from students' initial interview transcripts

Example of students' responses	Codes	Sub-themes	Themes
"…The conventional master suits those who are in their young ages, kind of. But, because of my age (1), work and other commitments (2), I think that the master at a distance is more suitable to me …" (LA-SK)	(1) Age (2) Work and commitments	Motives and reasons for learning at distance	Preconceptions and experience of learning at distance
"I am a full-time worker (1) …it is impossible to attend regular classes ...honestly ...we have opted for it because it is the most thing that can help us (2)" (LA-SA)	(1) Work (2) Flexibility		
"Learning about this initiative and then subscribing is a good chance for those like me…sometimes the employees like to have more certificates just to get promotions at work" (LA-SS)	Job promotion		

"I was wishing to have a chance like this programme so that I can pursue further postgraduate studies" (AL-SN)	Pursuing postgraduate course		
"I was so excited about this idea and I wanted to try studying from home" (AL-SL)	Excitement and desire to study from home	Prospects of studying at a distance	
"It is just curiosity that made me want to experience this master's at distance" (AL-SU)	Curiosity to experience studying at distance		
"I did my own research, I searched in some European university's websites…I was imagining that we will communicate with the teacher and other colleagues, audio-visually…like learning in a classroom" (AL-SH)	Expecting classroom-like type of learning		
"It's just that fear of something new that we gave it too much weight than it should be given…it's the fear of the unknown" (AL-SN)	Fear of the unknown	Expected challenges	

"... The major concern was the internet … the internet is very expensive and at the same time so weak ..." (AL-SH)	Poor quality of internet connection		
"I was anxious because I personally didn't have a solid background in technology" (AL-SN)	Anxiety because of low technological proficiency		
"I received training in information technology a year before enrolling into the DL programme and did not struggle with this aspect" (AL-SH)	Already equipped with information technology skills		
"It is just worrying about having little time for studying…being full-time employees and having families to look after" (LA-SJ)	Anxious because of commitments		
"The difficulties I encountered were all technical…the online platform was sometimes not working because of technical matters" (LA-SL)	Technical problems pertaining to the online platform	Experienced challenges	

"The internet connection was a nightmare…" (LA-SV)	Internet connection		
"There are other challenges related to the process of communication between teachers and students... we don't receive immediate answers" (LA-SY)	Absence of immediate feedback		
"I had a problem with time commitment due to work and family sometimes I just couldn't reconcile" (LA-SC)	Time commitment		
"… We deal only with frozen lectures" (AL-SI)	Frozen lectures		
"The teacher's proximity and direct communication can solve the problem (1) …with these two being absent, our interaction is almost non-existent (2)" (LA-SC)	(1) Lack of teacher's proximity and direct communication (2) Absence of interaction	Student-teacher interaction	Perceived interaction

"One of the problems is related to the teacher, not knowing who the teacher of the module is until the day of the written exams is a problem (1). In addition to that, the queries that we posted on the online platform have not been replied to (2) …" (LA-SR)	(1) The problem of inability to recognise the teacher (2) Lack of responsiveness		
"… Instructors are also under pressure as they are responsible on teaching in this distance learning course and in the classroom …correcting tasks and preparing…is too much…" (LA-SV)	Teaching work overload		
"...There is a huge number of students who registered that is about 600 students…teachers cannot handle all this number and the direct communication is impossible…" (LA-SS)	Large number of students inhibits direct communication		

"All the communications on the platform were in the written form (1) and because of this, one of our colleagues had a poor eyesight (2) as a result of being glued to her computer all the time but if lectures were sent to us in the form of videos or the audio communications it would be much better than just reading and writing (3)" (AL-SE)	(1) Text based content (2) Loosing eyesight because of reading (3) Preferring audio/video content	Student-content interaction	
"The students' discussion forum does not have that quick point of communication; for example, I put a question and after a while, some colleagues come to comment, and after a longer period I enter to see that question and also put my comment" (AL-SH)	Discussion forums lack immediacy	Student-student interaction	
"The discussion forum was designed to exchange ideas between students but not too many students contribute, very low interaction" (AL-SD)	Low interaction on the discussion forum		

"...How many times we have contributed on the discussion forum is also counted by a software on the online platform and presents a specific percentage that is included in our final marks (1) and once students knew that, there had been a dramatic increase in the number of comments on the forum (2) however, the quality of the contribution is what bothers me the most, I ask a question and receive no answer so I stopped because I found only comments like "Hi" or "Thank you", I mean they were contributing for the sake of showing that they were active on the platform and not to add an important content (3)" (AL-SH)	(1) Contributions on the discussion forum are marked (2) Interaction for grades (3) Contribution for the sake of showing presence		

"…One of my friends invited me to join the group on Facebook, so I accepted the invitation…It was initiated by a student from our programme and students were posting different things, any announcement or news about our course like exam dates or the deadline of submitting tasks" (LA-SV)	Students' initiated group		
"…Since everyone has his own commitments and sometime you post a question even on Viber, they don't reply, you wait till night or the day after, this is our problem, we are busy, no one has time to spare" (SA)	Lack of availability of students		

"I am personally an audio-visual learner (1), I can understand the information more when I see it and communicate with it personally than reading it; maybe this is related to the interaction with the information but I don't prefer the dead style that has no soul (2)" (AL-SW)	(1) Audio-visual learner (2) Not preferring written communication	Reasons for interest in audio-visual communication	Pre-conception of audio-visual communication
"When communicating with those who don't put their personal picture either students or teachers, I feel as if I am communicating with an unknown person so If I decided one day to go to meet the teacher face-to-face, he probably may pass by me and I won't recognize him" (AL-SN)	Anonymity and inability to recognize faces		

"I think it would better, and the educational process would be even better because it will be there more communication between me and the teacher and my understanding and comprehension of the lesson would be so high (1) because I think that the communication via writing is so dead and frozen and free of sentiments that it does not communicate the idea (2) but when you see and hear the teacher lecturing and there is interaction between him and students, there is liveliness (3)" (AL-SN)	(1) Help improve understanding (2) Writing does not communicate ideas (3) Audio-visual communication brings interaction into life		
"We can resume so much time by doing so (1) but if there is no teacher (2) and no secured platform (3), I wouldn't risk doing so…I heard a lot about security and hacking crimes (4) …" (AL-SN)	(1) Audio-visual communication saves time (2) Lack of teacher's presence (3) Not using secured platform (4) Digital security and hacking personal data	Concerns about audio-visual communication	

"There are other social, traditional, ideological and religious aspects that come against this type of direct communication via audio-visual means whether it was an audio call or video calls. Thus, not all people in our society will accept this idea whether it was a male or female" (AL-SM) "I think that the audio-visual communication is a very good idea, but I think this idea might not have a widespread appeal by virtue of the norms of the Algerian society so, I think its acceptance won't be easy especially from the part of females, I don't think they will agree on showing up so may be the audio communication will be enough" (AL-ST)	Cultural resistance		

"There are students who are comfortable communicating behind the screen and I understand that because you come tired from work and you want to read your lessons comfortably" (AL-SB)	Comfortable communicating behind the screen	Low interest in audio-visual communication	
"I prefer learning through reading and that the information that I get through reading is enough (1) for me as there is no need for the visual communication because the information is what matters the most for me (2)" (AL-SD)	(1) Preferring reading (2) Information is what matters the most		
"I prefer a mix of recordings, video conferencing and writing because the recording helps the students to have a look at any time he wants, writing will help as a reference for taking pinpoints and the direct communication via videoconferencing will stimulate students more so that they won't feel marginalized (1) and there is seriousness	(1) A mix of all modes is preferred to suit the different learning preferences	A mix of all the modes of communication is preferred	

in work, in this case the student will be more interested and motivated to study (2)" (AL-SB)	(2) A mix of all the modes may increase interest and motivation to study		
"Speaking about my personal experience, I had a group that included most of master students on Viber and we were sometimes using video calls and communicating with each other and discussing academic issues with each other and there is also without forgetting the contact over phone" (AL-SI)	Experiencing audio-visual communication with fellow students using social media	Experience of audio-visual communication	
"Skype, I know how to use it to make a call, how to open the camera and how to close it, how to send pictures and write but the recording method…I use it to communicate with friends who are living abroad" (LA-SA)	Using Skype for personal reasons	Knowledge of Skype	Perception of using Skype

"I know Skype but I personally need training because I didn't use it long time ago" (LA-SQ)	Need for training		
"Honestly, I am so excited about this idea, I think that skype would be better than messenger because we are now talking without internet disconnection which may not be the case while using messenger so, I think that it facilitates the discussion better than just writing messages" (AL-SI)	Excited about using Skype	Acceptance to use Skype	
"I think Skype will be so useful for the distance learners because it will embody a virtual classroom like the real one which means that it will enable us to live all the learning conditions that exist in the real classes" (AL-ST)	Simulate classroom setting		

"I believe that, like when using any other tool not only Skype, there will be some technical deficiencies related to the internet connection so, this is what will hinder the calls because the quality of internet connection is so weak in Algeria thus, this is my only concern other than that I am thrilled to try Skype in an academic field" (LA-SL)	Technical and internet concerns	Concerns about using Skype for academic purposes	
"…My only concern is to hack our data and use our videos for other purposes, this is my concern, is to go out from the academic circle to other unwanted things" (AL-SN)	Cyber security		
"To be honest I had my doubts especially because these Skype discussions won't involve the teacher who we know that's why I asked about using only the audio form in our coming discussions and thank you for accepting my request" (AL-SR)	Lack of teacher' s supervision		

"…Honestly, it is about the updates, what have been announced on the platform, if there are any new activities to submit or exams. The majority of topics were on the schedule of the programme and what is new" (LA-SA)	Exchanging ideas and updates	Experience of informal PL on social media	Pre-conception and experience of PL
"…The lack of coordination between the members of the group and sometimes no tolerance in views create some problems" (AL-ST)	Peer conflict		
"We have agreed several times to arrange for a specific time and enter the group and we agreed to meet on the afternoon that proceeds the exams, Sunday 8 o'clock in the afternoon but nobody made it, everyone says I have commitments so we turned to study individually…" (AL-SA)	Problem of agreement about meeting time		

"We felt so isolated a number of times, we felt so lonely and isolated …in order to get rid of this feeling, we turn to the groups on Facebook and messenger to share our problems and concerns with each other" (AL-SE)	Coping with the feeling of isolation		
"Maybe the non-compliance with appointments (1), possibly the bad internet connection (2). I mean these are the problems that I can imagine, it could be as we said before, there could be misunderstanding between students and clinging to one's own opinion as I said earlier (3)" (LA-SF)	(1) Lack of commitment (2) internet connection (3) peer conflict and misunderstanding between the members	Concerns about Skype PL	Expectations of Skype PL

"My concern is primarily that we will fail in achieving the desired purpose we are aiming out of these coming sessions and fall into the trap that we are going to deviate from the topics that we have programmed…" (AL-SM)	Failure to achieve the goal		
"Having only small number of students would make the discussion beneficial for everyone" (AL-SD)	Small number of students	Need for coordination and organization	
"In the group discussion there is an important thing , it has to be there someone to handle the discussion or the chat (1) but the rest of students have to commit to follow (2) and respect the views of each other (3) and open a space to the student who monitors the chat or the discussion and give him the opportunity to let him give everything he has and then later have the opportunity to express opinions or discuss or ask questions (4)" (AL-SZ)	(1) Someone to handle the discussion (2) Commitment (3) Respect (4) Open expression		

"It is preferable to select a topic and discuss it and to be useful, before we start at least we should be prepared, we should be already agreed on the topic and then start and see how the discussion would be" (LA-SA)	Selecting time and topic preparation		
"I just want to finish this programme and meeting with other students will motivate me to study and succeed in the exams" (SE)	Motivation to successfully complete the programme	Educational and social support	Reasons for participating in Skype PL
"Like I said previously I want to experience the atmosphere of the classroom again because we mostly study alone and feel isolated" (AL-SO)	Isolation and classroom like community		
"I just feel curious to try this experience and see whether it will work or not" (LA-SF)	Curiosity about Skype PL		
"There are a lot of administrative practitioners in our cohort, lawyers, and administrative responsible so I want to avail from their professional experience" (LA-SA)	Peer professional experience		

"When you study alone you will get bored easily so this Skype group is an opportunity to revise and ask questions" (AL-SI)	Revision and checking understanding		

Appendix J: The approach of coding data and the emerged themes from students' reflective logs

Example of students' responses	Codes	Sub-themes	Themes
"It is a new experience for me I enjoyed it" (AL-SH, Reflective log-1)	New and enjoyable experience	Feelings about Skype PL	Feelings about the Skype PL session
"I felt positive about today's session" (LA-SL, Reflective log-3)	Positive feeling		
"It is the first experience and I was uncomfortable at the beginning but I got used to it quickly because the members were respectful and friendly" (AL-SN, Reflective log-1)	Feeling uncomfortable at first		

"I felt comfortable and engaged in this session because the members were friendly, unlike the previous one in which I felt confused because it was my first experience" (LA-SR, Reflective log-2)	Becoming comfortable		
"I felt comfortable and I enjoyed the session" (AL-SM, Reflective log-5)	Feeling comfortable		
"Satisfied as if I am studying in a classroom" (AL-SI, Reflective log-3)	Satisfied as if I am in a classroom	Overall satisfaction	

"I sensed a satisfying progress" (LA-SS, Reflective log-2)	Sensing satisfying progress		
"I am willing to attend the next session" (AL-SH, Reflective log-3)	Willingness to attend the next session	Motivation to attend the next session	
"I felt progress in my sense of belongingness to a learning community" (LA-SY, Reflective log-5) "My ability to express myself freely was normal" (AL-SI, Reflective log-3)	Social presence	Effects of Skype PL on the development of CoI	Perceived development of a community of learning

"I feel a sense of belonging as if I am present in the university amphitheatre" (AL-ST, Reflective log-3)			
"The session affected my ability to construct meaning through sustained communication in a positive way" (AL-SM, Reflective log-3) "I felt progress in understanding the content" (LA-SL, Reflective log-2)	Cognitive presence		
"My ability to facilitate the learning of others was good" (LA-SK, Reflective log-2)	Teaching presence		

"(AL-SN) was managing the session as a teacher" (AL-ST, Reflective log-3)	Teaching presence		
"This space gathered peers with the same purpose, same inclination, same concern, and nurtured the social presence" (AL-SN, Reflective log-1) "I felt that I was interacting effectively and comfortably with my peers and that we have established a community of learning" (LA-SY, Reflective log-5)	Having same purpose nurtured social presence Interacting effectively and comfortably	Thoughts about establishing a community of learning	

"The interaction with the content was easy and LA-SK clarified so many things that were difficult for me" (LA-SS, Reflective log-3)	Easy and the content was clarified	Interaction with peers and content	Perceived interaction
"The interaction with my peers was direct and active" (AL-ST, Reflective log-2)	Direct and active		
"My peers interacted with me and responded to my questions immediately" (LA-SA, Reflective log-6)	Immediate response		

"The incident I encountered in this session was that some of my peers left the microphone open even when not participating which made me feel that they were not taking the sessions seriously" (LA-SS, Reflective log-2)	Leaving the microphone open	Incidents encountered	
"In this session, AL-SN handled the showed a good facilitation practice that enriched the discussion" (AL-SD, Reflective log-2)	Good facilitation practice		

"The negative incident that I encountered in this session was that one participant was speaking only using the microphone and then turned on his webcam and it happened that I mixed between his voice and his face and this incident confused me thinking that a new member had joined but it added a very cheerful atmosphere" (AL-SN, Reflective log-4)	Confusing between the members		
"In today's session, I felt that I contributed to the understanding of my peers because of the little research I have done before coming to the session and I was	Facilitating peers' understanding	Contribution to the session	

happy when my peers told me that they could finally understand the ramifications of applied linguistics based on my explanation that was supported by definitions of famous authors" (AL-SN, Reflective log-2)			
"The session was not good enough" (AL-SM, Reflective log-1)	Not good enough	Evaluation of the session	
"It is successful and purposeful because it is direct audio and video with constructive discussion thanks to direct communication via Skype" (AL-SM, Reflective log-3)	Successful and purposeful		

		Challenges	
"The weak internet was disturbing the conversation from time to time (1), also some members of the group didn't choose appropriate places to communicate from and their background was noisy (2) ...silence of some members sometimes (3)" (AL-SH, Reflective log- 1)	(1) Internet connection (2) Noisy background (3) Silence of members		
"My peers were not totally responsive and I hope they use the webcam next time for more interactive learning" (AL-SN, Reflective log-1)	Not totally responsive		

"Some of the students came to the session without preparation which made the discussion limited to only few members" (LA-SA, Reflective log-3)	No preparation		
"The timing of the session was a bit late and I hope my peers agree to have the session sin the morning time" (AL-SM, Reflective log-5)	Late time of the sessions		
"Some students had sound issues which is probably because of the weak internet connection" (LA-SG, Reflective log-5)	Sound issues		
"I benefited from the working experience of other members" (LA-SG, Reflective log-2)	Sharing professional experience	Outcomes and gains from the session	Perceived learning and sense of community

"We came out with a conclusion about the cultural and social dimension of applied linguistics" (AL-SH, Reflective log-4)	Reaching a common conclusion		
"Learning how to communicate with other students via Skype" (AL-ST, Reflective log-1)	Communication via Skype		
"I got to know some new figures" (LA-SY, Reflective log-2)	Social networking		
"I gained new information and I was able to understand from my peers why some of the ideas were not correct" (LA-SL, Reflective log-4)	Clarifying understanding		

"I felt being a part of a learning community (1) and I learned strategies of managing discussion from the peer facilitator I learned a lot and it widened my insight (2)" (AL-ST, Reflective log-6)	(1) Sense of community (2) Learning strategies of facilitation		
"It was the easy use of Skype" (AL-SN, Reflective log-3)	Easy to use	Skype as a learning environment	Perceptions of Skype
"Skype created a serious learning environment (1) and made my learning experience more personalized (2)" (AL-SN, Reflective log-1)	(1) Serious learning environment (2) Personalised learning		

"It has the ability to simulate classroom interaction (1) because it is easy and comfortable (2) and yields so much information than just writing (3)" (LA-SL, Reflective log-4)	(1) Classroom -like environment (2) Easy and comfortable (3) Facilitate learning		
"I plan to prove my attendance by preparing information and participating more" (AL-ST, Reflective log-3) "Preparing more evidence to support my information" (LA-SK, Reflective log-2)	Preparing in advance	Plans for future sessions	Areas of improvement

"I hope all the participants next time would use their webcams for more interactive learning because it was hard to follow the discussion when seeing no faces" (LA-SN, Reflective log-1)	Not using the webcam affects concentration		
"We need to tackle more practical topics next time" (AL-SM, Reflective log-1)	Need tackling practical topics		
"In the future the peer facilitator needs to be careful about spending long time in the introduction and defining keywords" (AL-SH, Reflective log-6)	Time management		

"The session was a bit messy, I hope that the peer facilitator acts quickly next time and stops the side talk because most of us do not have time to waste" (LA-SL, Reflective log-1)	Improving discussion management skills		

Appendix K: The approach of coding data and the emerged themes from students' final interview transcripts

Example of students' responses	Codes	Sub-themes	Themes
"I found this strategy encouraging to revise for the end of term exams" (LA-SK)	Motivation to revise	Academic reasons	Reasons for participation
"… This space allowed us to share real academic conversations" (AL-SH)	Sharing real academic conversations		
"I wanted to confirm some points I had in my mind that I was not sure about …" (LA- SR)	Confirm understanding		

"The members were providing information based on their work experience and I wanted to learn more from them" (LA-SG)	Learning from work experience of others	Personal reasons	
"As I said previously, this method is new for me and I was curious to try it an see how it works" (AL-ST)	Curiosity to try new method of interaction		
"It is my pleasure to meet such professional students that are in my same programme but we didn't have the opportunity to get to know each other before" (LA-SL)	Getting to know fellow students in the same programme		

"...I could form a personal connection with my peers (1) and relate to our experiences as I always wanted experienced students to be with us in the group (2) and the chemistry and response between us reached the top (3), we have experienced diversity of thoughts (4)" (AL-SH)	(1) Forming personal connections (2) Sharing experience (3) Developing chemistry between members (4) Experiencing diversity of thoughts	Benefits of peer interaction	Perceived interaction
"Everyone was listening to each other and correcting some mistaken definitions and answer immediately, and this was not the case in the discussion forum in which they were skipping comments or not answer at all" (LA-SA).	Responsiveness and immediacy	Usefulness of the audio/visual interaction	

"Learning via the online platform sometimes makes you boring and routine and create passivity because you interact with a screen (1) however, learning with my peers made me pose questions and receive immediate answers that lead to other deeper questions and new horizons of thinking (2) despite the online platform involve the discussion forum but still miss the element of personal interaction (3) and deep discussion that I found the sessions perfectly offering it and I could feel something concrete and not inanimate (4)" (AL-SN)	(1) Interacting with the screen creates routine and passivity (2) Immediacy and deep discussion (3) Personal interaction (4) Learning with peers is animate		

"These sessions are like meeting in the library to revise together for exams" (LA-SS)	Emulation of face-to-face meeting		
"The directness of the communication (1) made it easy to communicate with no keyboard hustle (2)" (AL-SH)	(1) Direct communication (2) Ease of communication		
"I went back to the recording just once to check again the date of a legislative act that LA-SK mentioned, I found that interesting to consider in my final revision for the exam" (LA-SY)	Checking information	Usefulness of the recordings	

"AL-SN played an important role in keeping the community of learning together" (AL-SH)	Keeping the community together	Usefulness of the peer facilitator	
"I am happy that LA-SK accepted to lead the discussion because he was the right man in the right place and he did a great job in keeping the discussion going" (LA-SG)	Keeping the discussion going		
"The important thing is that we didn't deviate from the main topic and our interaction was purposeful; we didn't waste time or talk about unrelated aspects and thanks go to AL-SN" (AL-SM)	Focus on the topic		

"Having a facilitator for the group was important to maintain organization…" (LA-SA)	Maintaining organisation		
"…The peer facilitator brought professional experience to the session which was necessary especially for the type of topics that we discussed" (LA-SS)	Professional experience		
"I remember that when we discussed sociolinguistics, she offered useful illustrations from different references and this was so helpful" (AL-ST)	Shared references		

"The sessions were like meeting in the library to revise together for exams and the peer facilitator was like that one student who is good in mathematics and leads the discussion to explain to us and answer our questions" (LA-SS)	The more knowledgeable one		
"…However, the issue of time commitment on the part of the group members and having the peer facilitator resuming the discussion for the late comers was time consuming and also I think the time spent on finding the key words was longer than it should and the same for the discussion on what to include in the introduction part" (AL-SH)	Time management issues	Drawbacks of having a peer facilitator	

"It is just sometimes the peer facilitator didn't intervene to stop the side talk" (LA-SL)	Problems of focusing on topic		
"Teacher's supervision is still needed to make sure that we are not transmitting wrong information" (LA-SL)	Concerns about wrong information	Need for the teacher's supervision	
"I suggest having a scheduled debriefing between the peer facilitator and the teacher to check the validity of the answers" (AL-SH)	Suggesting debriefing with the teacher to guide understanding		
"The teacher should review the recordings and evaluate the contributions so that we have a clear idea that we are on the right track" (LA-SR).	Suggesting reviewing the recordings by the teacher		

"We were not only discussing academic topics, but we were also building a relationship (1) that cannot exist in the written discussions and this reduced the loneliness we felt when revising alone (2)" (LA-SL)	(1) Building relationships (2) Reduced feeling of isolation	Sense of closeness	Perceived sense of community
"These sessions brought us close to each other (1) and extended my friendship circle and I am still in contact with them even after the sessions (2)" (LA-SS)	(1) Feeling closeness (2) Networking		

"Feeling that you belong to a group does seldom happen" (LA-SS)	Belongingness	Joint goals and common interest	
"The members who accepted to participate all had the same interest and came for the objective of revisions and also were respectful to each other of course because we are all adults so I think it is a good thing that there was acceptance of the initiative" (AL-SI)	The sessions gathered students with mutual interests and goals		

"I felt insufficient interaction in some sessions (1), and those moments of silence (2) made me think about leaving the session (3) …I do not really remember which session, but I remember that we were only five (4) and two were experiencing bad internet connection (5) and I honestly was thinking to leave because I did not want to waste more time (6)" (AL-SI)	(1) Insufficient interaction (2) Moments of silence (3) Thinking about leaving the session (4) Low number of students (5) Internet issues (6) Feeling of wasting time	Obstacles to the development of sense of community	

"I found that my peers had really good mastery of the material and could add things to my knowledge and especially practical things (1) that I could understand better (2) and in a much simplified way (3)" (LA-SA)	(1) Contributing to knowledge (2) Improving understanding (3) Facilitating understanding	Facilitation of learning	Perceived learning with peers
"As I said previously, all the members contributed to clarifying some concepts, and clear up the confusion (1) and this involvement in deep discussions made it easy to remember some key concepts and definitions (2)" (AL-ST)	(1) Clarifying concepts (2) Consolidating meaning		

"…We took a lot of good points we didn't know before (1)" (LA-SA)	(1) Learning new information		
"…We could actually detect these misconceptions (1) and give arguments to correct the falsified information (2), it happened to me as it happened to my peers as well and I am very happy that I no longer have falsified definitions of some key concepts (3) …" (AL-SN)	(1) Detecting misconceptions (2) Correcting understanding (3) Reassuring understanding		

"Some aspects that we dealt with in the sessions were among the questions so I could include some points that I learned during the sessions and I used the internalized information that I had from our discussions and what we came out with and used them of course" (LA-SA)	Applying learned information	Application of knowledge	Perceived Learning with peers
"These sessions achieved great results and the proof is that I classified 16 from 80 and was there a great benefit especially concerning the methodology and I remembered how to approach the text of the question by starting with the key words and some	Sensing progress and increased academic achievement		

elements like definition of concepts so I found myself able to answer some aspects" (AL-SH)			
"It created an interactive space" (LA-SS)	Adding interactivity to learning	Perceived advantages of Skype	Perceived use of Skype
"It is beneficial and simple to use (1) and it was a good addition because through it we experienced the audio-visual communication (2)" (AL-ST)	(1) Simple to use (2) Added the experience of the audio-visual communication		
"Something new for me to speak about academic matters via Skype" (LA-SY)	Unfamiliar experience		

"…I am a person who learns better by listening and speaking so it suited my style" (AL-SN)	Suitability for audio-visual learners		
"I am happy with using Skype and honestly, I did not have to revise the definition of some terminologies again because I could memorise all that we were discussing especially the names of the pioneers of each field, elements and basics and things I used to confuse between" (AL-ST)	The audio feature of Skype helps memorising		
"Skype was helpful because I could just use it from my phone, put on the earphones and do whatever I want to do while	Flexibility of access and allowing multitasking		

listening to the group contributions and if there is a question or something I know, I intervene…" (LA-SG)			
"It was like we were sitting in the same room" (LA-SA)	Similar to face-to-face meeting		
"There is the issue of the internet connectivity that made us unable to listen to each other and discuss smoothly" (LA-SL)	Weak internet connectivity	Challenges of using Skype functionalities	
"Generally, it was good but it would be better if we used the feature of sharing the screen and the webcam in all the sessions" (AL-SM)	Not exploiting different Skype functionalities		

"Some members did not use the webcam at the beginning, it was hard to identify who was talking. It happened that I mixed between two students actually it was only one student who was talking and then suddenly turned on the webcam so I thought he was a new member and I started welcoming him an repeating the question for him until he told me that he was the same person who was discussing with me that was a bit confusing and It was a bit funny that I posed for a while trying to process what was going on. But after a while I became used to their voices and I really thank them for their patience" (AL-SN)	The webcam is necessary to identify who is speaking		

"Hearing others talking about ideas is enough for me, I do not think seeing their faces can make any difference" (LA-SY)	The webcam is unnecessary		
"There is nothing wrong with Skype, it is like any other technology, but the issue is in the user (1); I personally used the webcam in the first session if you noticed but when I saw none of the females using it after a while, I felt uncomfortable and embarrassed and I turned it off (2)" (LA-SS)	(1) Using the webcam is a matter of preference (2) Uncomfortable being the only female using the webcam		

"I was turning off the webcam sometimes when the internet was weak to not cause the lag time associated with hearing the sound" (AL-SI)	Not using the webcam for technical issues		
"It was the problem of forgetting to use the muting functionality of Skype although it was very clear where to find it but some students kept forgetting it and I couldn't concentrate sometimes" (AL-SM)	Muting the microphone and issues of background noise		
"I didn't think of using it honestly; it was not necessary, we started with the microphone and we continued that way" (LA-SN)	Using the chat was not necessary		

"...If it was a Skype discussion with a teacher, they would definitely use an office and be presentable, but I did not sense any seriousness from the way some of them were sitting or the place they were connecting from" (LA-SS)	Sensing lack of seriousness from the posture and the informality of the session		
"Yes, we exchanged some questions and answers on Skype chat two days before the exams…" (LA-SR)	Using Skype chat to exchange information	Peer group interaction after the Skype sessions	Interaction beyond the Skype PL sessions
"Thanks to these sessions I had the chance to meet some of the members personally when we sat for the exams and it was a great	Face-to-face social meeting		

feeling to meet my peers and not for revision" (LA-SL)			
"We contacted each other via messenger to check on each other from time to time but nothing related to the content of the programme" (AL-SH)	Social contact		
"These sessions helped us to revise when the exams were close (1) so, there is no need for more meetings at the moment (2)" (LA-SG)	(1) Usefulness of the sessions to revise for the exams (2) No need for meetings after the exams		

"I suggest that the chat functions of the online platform should also activate the audio-visual communication so that students can interact with each other and arrange groups to discuss with each other (1). I mentioned previously that the time each student spend on the platform is also included in our final grade so this will be another enjoyable experience to be added on the platform that can be graded (2) and we will be benefited in return as if we are present in a classroom and we can form small groups to control the discussion and everyone can participate and the	(1) Using the online platform instead of Skype (2) Grading the PL discussions	Suggestions for formal application of PL in the DL programme	The future of the Skype PL sessions

teacher evaluate our progress at the same time (3)" (AL-ST)	(3) The teacher evaluates the progress		
"For me it should be optional and students volunteer to be a part of it whenever they want (1) because it is not suitable for all students and their learning preferences might be different and possibly they will reject contributing in these sessions (2)" (AL-SH)	(1) PL should be based on voluntary participation (2) Considering suitability for learning preferences	Suggesting an informal application of PL	

"It is more preferable to have a peer facilitator from the previous cohort because he might have an idea about the questions that are mostly included in the exams" (LA-SG)	A peer facilitator from the previous cohort is preferable	Suggestions for selecting the peer facilitator	
"I think the peer facilitator should have a guide explaining what to do and this is enough. There is no need for the teacher to intervene; it is a practice that is organised by students otherwise it will lose its essence, the important thing is to have a plan" (AL-SN)	Providing the peer facilitator with a guide explaining his/her role is enough		

Appendix L: The approach of coding data and the emerged themes from teachers' interview transcripts

Example of teachers' responses	Codes	Sub-themes	Themes
"It is an amazing experience for me and enjoyed it to be honest" (LA-T5)	Amazing experience	Positive aspects about teaching online	Experience of teaching online
"This kind of remote teaching makes you feel a kind of anxiety" (LA-T3) "For me I experience a workload that was so unbelievable which made me unable to provide adequate support to all the students" (LA-T2)	Anxiety Teacher workload	Challenges	

"…I personally organise general forum where I open the space to students to discuss between each other and the private forum, there are so many activities and means at the level of the online platform that enhance the community building. We also have private emails also at the level of the platform…" (LA-T1)	Designed to enhance community building	Advantages of the online platform	Perceived interaction
"So you can imagine that in each one hour session, about 25 students converse with you simultaneously (1) and each ask a question in the same time or give an answer so the window that is open in the platform and the messages escalating before your eyes which disables the teacher	(1) Text-based simultaneous chat	Challenges	

from following all the students' contributions and questions (2) which made me go back again to the top to follow the answers and it most of the time goes out of control (3)" (LA-T5)	(2) Inability to follow comments (3) Laborious task and loss of control		
"Well in the forums, the teacher pose a topic of discussion and open the space to all the students to contribute and later on the teacher revise them in any time he like (1) but for the chat it is different in that it is synchronous and consequently, does not give enough time for the teacher and mostly it lasts 2 hours with only one group and this is the major problem that arise from using only the keyboard (2) " (AL-T7)	(1) Flexibility of evaluation in the forums (2) Synchronous chat and keyboard issues		

"Facilitating a discussion using only text-based communication is the hardest thing I have ever experienced because of the teachers' meeting with a number of students behind a computer screen through the so-called programmed chat sessions, which are written" (LA-T1)	Text-based instruction is difficult		
"The online platform is often not an integrated tool but requires support, tools and other media" (AL-T7)	The platform is not an integrated tool		

"I personally didn't try it (1) but it would be good for confronting students because it could be easier than confronting students behind a screen (2)" (AL-T6)	(1) No prior experience (2) Easy to confront students	Advantages of audio-visual communication	Preconceptions and experience of audio/visual communication
"If there is a synchronous discussion with the same method of video conferencing, it surely will offer immediacy and direct interaction with students" (AL-T7)	Immediacy and direct interaction		
"The huge number of students prevents, technically and even pragmatically, the teacher from	Huge number of students prevents video conferencing	Challenges of using audio-visual communication	

interacting with all the students visually" (LA-T5)			
"It would be a bit chaotic if some teachers used different software such as Skype and Zoom and not stick to the platform or a unified software" (AL-T4)	Not using a unified software may result in chaos		
"Many female students and even males may reject the invitation of using the webcam maybe because of societal traditions and maybe if you have noticed, most students don't put their pictures as a profile… I think that this is a social idea that	Students' resistance to use the webcam because of cultural reasons		

persists in most of the society and not only students" (LA-T2)			
"Not using the video feature may go back to the teacher's circumstances for example, not having time especially that making a video requires a lot of time and effort…recording a video requires a lot of effort especially if you want to resume everything in a couple of minutes. For me, I spent almost two days preparing that introductory video, repeating over and over" (LA-T1)	Teachers' circumstances		

"Students usually don't appreciate informal activities that are not officially approved so their acceptance to involve in these discussions is a matter of appreciation" (LA-T5)	Students' appreciation of informal activities with peers	Acceptance of PL	Perceptions about Skype PL
"So, I was using peer learning in an indirect way so that students may benefit from each other (1). I think that this strategy is ideal in that it gives the space to the student to give away all what he/she has and do research and participate (2). So, this goes back to the teaching style because what is interesting is to share practices from a particle side… That's why I believe that the	(1) Using PL implicitly (2) Give space to the student to actively engage in learning	Teachers' use of PL	

strategy of peer learning is complementary and provides support to the student (3)" (LA-T1)	(3) Complementary strategy	Teachers' use of PL	
"…For example, when I was doing a chat about the tax law module, I had many students working in the tax directorate so I was giving the word to that student and ask him for example to explain to the other students the idea so what they do is to explain in the simplest way that I might not be able to do it in a similar way. So, the student in this case is the one that provides support to you	Asking a knowledgeable student to simplify meaning		

and benefits his fellow students at the same time" (LA-T3)			
"I really believe that it can work especially in case where the programme includes a lot of students. In humanities and social sciences or law or literature; all these subjects require discussion, so it can work" (LA-T5)	Suitable for humanities and social sciences	Teachers' support for PL	
"I encourage this practice because it opens a space for students to collaborate and revise with each other at a distance" (LA-T1)	Supporting the collaboration aspect of PL	Teachers' support for PL	

"There is no problem with having students participate in such discussions as long as the received information is correct and derived from trusted sources such as books and official and trusted websites" (AL-T7)	Dissemination of wrong information	Concerns about PL	
"If students disagree they turn to someone who can resolve the issue. So, they believe that the presence of the teacher is crucial" (LA-T5)	The presence of the teacher is crucial to solve disagreements		
"The challenge is to have an eligible peer facilitator because it will turn into chaos if there is no facilitator who is eligible to take the responsibility and lead the discussion" (AL-T6)	Chaotic sessions if no eligible peer facilitator is in place		

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"To be honest, it has something to do with the mentality of the Algerian student, if there is a grade, there is seriousness. So, I experienced absences in the face-to-face classes so how things will be if we apply this strategy; that's why I said that it depends on each student" (LA-T1)	Grade-oriented participation		
"It should be there a clear goal that students should base their participation on like revision or project or assessment" (AL-T4)	Clear goal of the discussion	Conditions of employing PL	
"To just avoid chaos, I think that this process should be pre-set and has guidelines that are determined by the responsible of the programme or the teacher especially the content and	Determining the content and distributing roles should be done by the teacher		

distributing roles on students" (LA-T5)			
"Their presence in the forum or the chat space at a distance should abide the same rules and regulations that is the mutual respect, the rules scientific research, having a specific buddy facilitating this discussion either a teacher or a student" (LA-T1)	Ground rules		
"When it comes to the scientific disciplines that require discussions, the student number should be small because the nature of the discipline imposes that" (LA-T5)	A group of small number of students		

Appendix M: Examples of coding the PL sessions' transcripts of the Local Administration group

Teaching Presence

Categories	Indicators	Code	Examples
Design and Organisation	Setting the content of the discussion	DE1	"This session is about administrative disputes so to study this module we need first to start with a hint and then we move to the criteria for determining jurisdiction" (LA-SK, Session 4)
	Utilising the technological medium effectively	DE2	"Can you please use the mute function and use it only when wanting to talk so that we can hear each other clearly" (LA-SK, Session 4)
	Establishing netiquette	DE3	"Can we please be more organised and talk one at a time" (LA-SA, Session 5) "Let's give some space to our peers" (LA-SR, Session 4)
	Making macro-level comments about the content of the discussion	DE4	"In this session we will try to remind each other of the most important things related to this module and especially the one that raises controversy" (LA-SK, Session 3)

Facilitating Discourse Indicators	Identifying areas of agreement/disagreement	FD1	"I do agree with LA-SR but I disagree with you in this last point simply because the article mentioned exceptions" (LA-SK, Session 4)
	Seeking to reach consensus and understanding	FD2	"What you have said is similar to what LA-SS said earlier…" (LA-SK, Session 2)
	Encouraging, acknowledging or reinforcing student contributions	FD3	"Thank you for drawing my attention to this aspect" (LA-SK, Session 3)

"So, I will give you the choice to pick up the next aspect" (LA-SK, Session 4) |
| | Setting climate for learning | FD4 | "It is ok we are all learners and we can do mistakes" (LA-SA, Session 3) |
| | Drawing in participants, prompting discussion | FD5 | "If there are any questions or additions please feel free" (LA-SK, Session 2)

"Can the peer who raised this point go ahead and explain regulation of jurisdiction" (LA-SK, Session 4) |

	Presenting follow-up topics for discussions	FD6	"Now let's move to the topic of offers" (LA-SR, Session 6)
	Re-focussing discussion on specific issues	FD7	"We can come back to this later let's just understand the mistakes of first and second levels" (LA-SF, Session 3) "Let's focus more on the reintegration of employees…" (LA-SL, Session 3)
	Summarising discussion	FD8	"So as a brief conclusion to the session the main points we focussed on are…" (LA-SK, Session 3)
Direct instruction	Providing valuable analogies	DI1	"What I meant is that the law of deals is kind of ambiguous and each one gives his own interpretations but regarding the exceptions we need to talk about the general state …" (LA-SK, Session 6)
	Offering useful illustrations	DI2	"Given that I work in the field of public transactions, we usually follow this procedure…" (LA-SK, Session 4)

	Conducting supportive demonstrations	DI3	"The request for proposal is based on two stages which are…" (LA-SK, Session 6) "The procedure of the agreement and the different actors involved in the process are…" (LA-SK, Session 6)
	Supplying clarifying information	DI4	"I will explain this point, there is an exception that is mentioned in the article 802 that is about…" (LA-SK, Session 4)
	Making explicit reference to outside material	DI5	"There are so many journals that they can always refer to this field I can share this with you later" (LA-SA, Session 3)

Social Presence

Categories	Indicators	Code	Examples
Affective communication	Expressing emotions	AF1	"I feel more curious to know more, I really liked today's discussion and I'm willing to stay for more time" (LA-SA, Session 2)
	Use of humour	AF2	"Don't say I am dominating the discussion (laughing) as if I am a monopolistic enterprise (laughing)" (LA-SK, Session 6)
	Self-disclosure	AF3	"I just don't like the way this legislative act is used in my institution, especially as a contracted employee…" (LA-SL, Session 3)
	Expressing value	AF4	"I believe that the right of the employees is not fully practised and this makes me feel angry…" (LA-SA, Session, 4)
Open Communication	Quoting/ paraphrasing from others	OC1	"So what LA-SG said is that the judgement of his employer was subject to appeal ..." (LA-SY, Session 4)

	Referring explicitly to others' comments	OC2	"You mentioned earlier the lack of restraint…" (LA-SR, Session 6)
	Asking questions (not related to the topic of discussion)	OC3	"In which domain do you work?" (LA-SR, Session 3)
	Complementing and expressing appreciation	OC4	"Thank you so much you put a huge effort in this discussion, it was a simple and thorough explanation" (LA-SY, Session 6)
	Expressing agreement/disagreement	OC5	"Yes, I agree this is what I wanted to say" (LA-SR, Session 4)
	Personal advice	OC6	"When searching for the acts, have a look at the whole series of acts that are classified in chronological order…" (LA-SS, Session 2)
	Requesting permission to speak	OC7	"Can I say something?" (LA-SG, Session 3)
Group Cohesion	Vocatives	CH1	"I have a comment to LA-SS…" (LA-SG, Session 3)
	Refer to the group using inclusive pronouns	CH2	"It is good that we all participate together" (LA-SK, Session 4)

Phatic, salutations and greetings	CH3	"El Salem Alaikom everyone and welcome to today's session…" (LA-SK, Session 4)
Social sharing	CH4	"I apologise for the sounds, my daughter is playing next to me as I don't have no one at the moment to babysit her…" (LA-SL, Session 3)
Reflection on the discussion/ session	CH5	"We learnt a lot from today's session and there is always a chance to go through these cases again in the future so there is an opportunity to make change and close the gaps" (LA-SA, Session 2) "This session is a good opportunity to revise all together because there were many aspects that we were not aware of" (LA-SK, Session 4)
Reflection on technical problems	CH6	"It is a bit difficult to hear clearly the internet is so weak" (LA-SY, Session 2)

Cognitive Presence

Phase	Indicators	code	Examples
Triggering event	Sense of puzzlement	TE1	"I have a question since the discussion is vital. Although we stated that the worker is deprived of going through these stages, why is he directed to the ordinary jurisdiction" (LA-SL, Session 2)
Exploration	Exploration within the online community	EX1	"I am not sure but I think the judge is not an expert in calculating the total disability of the victim regarding beating for example or something else so, I think that in the case you have read, the judge did not make a mistake he was judging based on the available evidence" (LA-SA, Session 1)
Integration	Response to prompt and creating solutions	IN1	"The mentioned evidence denotes that they made a mistake. That's why it should be a formative letter that explains why choosing this urgent process. We experienced this in my work and the issue was solved with a formative sending with a requirement that is based on an urge need" (LA-SS, Session 6)
Resolution/ application	Defending solutions	RE1	Not identified

Appendix N: Examples of coding the PL sessions' transcripts of the Applied Linguistics group

Teaching Presence

Categories	Indicators	Code	Examples
Design and Organisation	Setting the content of the discussion	DE1	"This session is about discussing an exam subject and the question is about the difference between applied linguistics and general theoretical linguistics" (AL-SN, Session 2)
	Utilising the technological medium effectively	DE2	"Try to click on the icon showing a microphone to unmute your sound" (AL-ST, Session 1)
	Establishing netiquette	DE3	"This is just a reminder that I am just a peer facilitator which means that the talk is directed to you and you talk more than me" (AL-SN, Session 2)
	Making macro-level comments about the content of the discussion	DE4	"There is a methodology and there are steps that we should follow and this is a good opportunity to discuss some of them" (AL-SN, Session 1)

Facilitating Discourse Indicators	Identifying areas of agreement/disagreement	FD1	"I agree, this is an important key concept" (AL-SN, Session 6)
	Seeking to reach consensus and understanding	FD2	"Do we all agree on this point?" (AL-SN, Session 2)
	Encouraging, acknowledging or reinforcing student contributions	FD3	"Well said AL-ST, thank you for contributing" (AL-SN, Session 6)
	Setting climate for learning	FD4	"This is a good opportunity to clarify our thoughts, so what are your thoughts" (AL-SN, Session 3)
	Drawing in participants, prompting discussion	FD5	"Who wants to add something?" (AL-SN, Session 1)
	Presenting follow-up topics for discussions	FD6	"So, now we answered this question, let's move to the last one" (AL-SN, Session 4)
	Re-focussing discussion on specific issues	FD7	"It is an excellent metaphor and now let's move to the next point" (AL-SI, session 5)
	Summarising discussion	FD8	"What we have discussed today is that …" (AL-SN, Session 3)

Direct instruction	Providing valuable analogies	DI1	"This definition is similar to Ibn Jinni's one but with more focus on the functions of the language" (AL-SN, Session 2)
	Offering useful illustrations	DI2	"Jakobson focuses more on the function of the language to explain to his model" (AL-SN, Session 2)
	Conducting supportive demonstrations	DI3	"To give you an example, correcting errors when teaching standard Arabic to kids in primary school requires knowledge of psycholinguistics…" (AL-SN, Session 6)
	Supplying clarifying information	DI4	"I know that the lecture on the platform was not clear, try to have a look at the digital repository of the library of our university, you can find…" (AL-SN, Session 2)
	Making explicit reference to outside material	DI5	"The book of Mazin El Waad is a good source, you need to have a look at it" (AL-SI, Session 5)

Social Presence

Categories	Indicators	Code	Examples
Affective communication	Expressing emotions	AF1	"This issue of sound is upsetting" (AL-SN, Session 2)
	Use of humour	AF2	"This is a good tactical escape" (SN, Session 4)
	Self-disclosure	AF3	"I was preparing dinner…" (AL-ST, Session 4)
Open Communication	Referring explicitly to others' comments	OC1	"AL-SM, you mentioned that travelling increased your linguistic competence …" (AL-ST, Session 4)
	Asking questions (not related to the topic of discussion)	OC3	"Any news about the self-evaluation quizzes?" (AL-ST, Session 2)
	Complementing and expressing appreciation	OC4	"Thank you for your efforts, you came to this session well-armed" (AL-SD, Session 2)
	Expressing agreement/disagreement	OC5	"I cannot agree with you because everyone has his own style" (AL-ST, Session 2)

	Requesting permission to speak	OC7	"Can I say something?" (AL-SD, Session 2)
Group Cohesion	Vocatives	CH1	"AL-SM is right, I think the environment has an effect on learning a language" (AL-SI, Session 5)
	Refer to the group using inclusive pronouns	CH2	"Let us think about these types" (AL-SN, Session 4)
	Phatic, salutations and greetings	CH3	"El Salem Alaikum, how are you?" (AL-ST, Session 1)
	Social sharing	CH4	"Eid Mubarak to all of you" (AL-SH, Session 2)
	Reflection on the discussion/ session	CH5	"I enjoyed this session, it is informative" (AL-ST, Session 4)
	Reflection on technical problems	CH6	"The internet is slow in my place and I thought that it was my computer getting crazy again" (AL-SD, Session 2)

Cognitive Presence

Phase	indicators	code	Examples
Triggering event	Sense of puzzlement	TE1	"Is the automatic processing of the current Arabic language now and error analysis and treatment are among the issues?" (AL-SH, Session 4)
Exploration	Exploration within the online community	EX1	"In my view, the key words are…these are the ones that caught my attention" (AL-SI, Session 5)
Integration	Connecting ideas, synthesis	IN1	"Sociolinguistics encompasses age, gender and everything that is related to the social milieu" (AL-SH, Session 4)
Resolution/ application	Defending solutions	RE1	**Not identified**

Appendix O: Ethical Considerations

1. Obtaining permission and approval from the University of York's Ethics Committee on Research.

2. Seeking approval from the administrative programme managers of the two DL programmes involved in this study to collect data.

3. Seeking consent from participants and clarifying the purpose of the study.

4. Ensuring the participants' anonymity and confidentiality and assigning pseudonyms instead of using the participants' names.

5. Notifying the participants of the voluntary participation and their right to withdraw from the research at any time and respecting their decisions.

6. Notifying the participants of storing the transcribed material on a password-protected computer in order to prevent any unauthorised access.

7. Providing the participants with the researcher's email and phone number to establish contact about the data or any related concerns.

Appendix P: Students' Consent Form

Exploring the Online Educational Experience of Peer Learning: The Case of Second Year Algerian Masters Students at Distance

Students' Consent Form

Dear Participant,

I am Nihad Alem, a second-year PhD student from the Education Department at the University of York. I am currently carrying out a research project to understand how Algerian students enrolled in the masters' distance learning programme can learn from and with their peers by using a peer learning strategy mediated by Skype as a synchronous communication tool.
I am writing to invite you to take part in this research project.

For more information, please read this information sheet carefully and let me know if anything is unclear or you would like further information.

Purpose of the study

The study is designed to investigate the Algerian distance learners' experiences and perceptions about learning with their peers verbally and in a synchronous online environment (using Skype), and also to observe how their community of learning will develop through the period of three weeks, six sessions in total and one hour of virtual discussion each week.

What would this mean for me?

Your contribution is very important and what I am interested about is a record of your experience in an online environment, what you think about being a part of a learning community run only by students and mediated by Skype for the period of three weeks (6 sessions and one-hour Skype chat each session). Your information, views and experiences will be collected using audio/video Skype recordings of your discussion with your peers, reflective logs that you have to complete after each session you have participated in and Skype interviews to record your learning experiences prior and after the verbal peer learning sessions and which will take approximately 30- 50 minutes.

You will also be given the opportunity to comment on my transcriptions to ensure the true value of data.

It is expected that this study will help you as distance learners to meet each other virtually, share your ideas and concerns together, and revise topics that you find unclear or difficult to solve alone however, these meetings should not cover working on individual marked assignments.

Participation is voluntary

Participation is optional. If you decide to take part, you will be given a copy of this information sheet for your records and you will be asked to complete a consent form. If you change your mind at any point during the study, you will be able to withdraw your participation without having to provide a reason.

Anonymity and Confidentiality

I assure you that there is no potential risk or burden associated with this study and that the treatment of your information will be in the strictest confidence. All information, including any audio/ video Skype recordings of the peer learning sessions, Skype interviews, and reflective logs will be stored on a password-protected computer in order to keep any information that identifies students especially the video recordings confidential and to prevent any unauthorised access. Additionally, pseudonyms will be assigned for you that will be used on all research documents.

Data including recordings of the Skype sessions and interviews will be kept until January 2020 for transcription and analysis and then erased right afterwards. These data including your views and responses will be allowed to be accessed only by the researcher and her supervisor.

You are free to withdraw from the study at any time during data collection. However, it will not be possible to remove your data once you have submitted all responses because, the researcher will not be able to link the data to your identity since you are already anonymised.

Storing and using your data

Data will be stored on a password-protected computer in order to prevent any unauthorised access, and they will be only accessible to the researcher and her supervisor. Your views and responses will be quoted extensively, and the provided information will be used only for the purpose of research (e.g. through reports, academic publications and presentations). All the data

collected through Skype videos/ audio recordings, Skype interviews, and reflective logs may be used in anonymous formats in different ways.

Questions or concerns

If you have any questions about the research project or concerns about how your data is being processed, please feel free to contact me by email alem.nihad5@gmail.com or na991@york.ac.uk , or the Chair of Ethics Committee via email education-research-administrator@york.ac.uk.

 I hope that you will agree to take a part in this research. If you are happy to participate, please complete the form attached and return it to the following emails: alem.nihad5@gmail.com or na991@york.ac.uk

Please keep this information sheet for your own records.

Thank you for taking the time to read this information.

Yours sincerely

Nihad Alem

Exploring the Online Educational Experience of Peer Learning:

The Case of Second Year Algerian Masters Students at Distance

Consent Form

Please tick each box if you agree to participate in this research.

I confirm that I have read and understood the information given to me about the above-named research project.	
I understand that the research will involve Skype interviews before and after the Skype peer learning sessions and will take approximately 30-50 minutes, and also six sessions of Skype discussions with peers (one-hour per session) followed by a reflective log that I should fill in after each session.	
I understand that participation in this study is voluntary and I may withdraw from this study at any time without having to give an explanation.	
I understand that it will not be possible to remove my data once I have submitted all responses because, the researcher will not be able to link the data to my identity since I am already anonymised.	
I understand that all information about me will not be identifiable and will be treated in strict confidence, and that my name will be replaced by a pseudonym in any presentation or written work.	
I understand that any Skype audio or video recordings of me will be used solely for research purposes and will be erased on completion of data transcription and analysis.	
I understand that my views and responses will be quoted extensively and that I have the right to comment on the transcriptions to ensure the true value of data.	
I understand that your supervisor will also have access to my information and that you will be discussing the progress of your research with your Thesis Advisory Panel.	
I agree to take part in the above study.	

NAME_____SIGNATURE_____

DATE_____

Appendix Q: Teachers' Consent Form

UNIVERSITY
of York

Exploring the Online Educational Experience of Peer Learning: The Case of Second Year Algerian Masters Students at Distance

Teachers' Consent Form

Dear Dr/Sir/Madam,

I am Nihad Alem, a fourth-year PhD student from the Education Department at the University of York. My research project aims at understanding how Algerian students enrolled in the masters' distance learning programme can learn from and with their peers by using a peer learning strategy mediated by Skype as a synchronous communication tool.
I am writing to invite you to take part in this research project.

For more information, please read this information sheet carefully and let me know if anything is unclear or you would like further information.

Purpose of the study

The study is designed to investigate the Algerian distance learners' experiences and perceptions about learning with their peers verbally and in a synchronous online environment (using Skype), and also to observe how their community of learning will develop through the period of three weeks, six sessions in total and one-hour of virtual discussion each week.

What would this mean for me?

Your contribution is very important and what I am interested about is a record of your teaching experience especially your interaction with students in an online environment, what you think about the mode of communication used as well as your views about the place of the synchronous peer learning in the distance learning programme. Interviews will take approximately 30- 40 minutes.

You will also be given the opportunity to comment on my transcriptions to ensure the true value of data.

It is expected that this study will help the distance learners to develop their own learning community where they can share their ideas and concerns together, and revise topics that they

find unclear or difficult to solve alone however, these meetings did not cover working on individual marked assignments.

Participation is voluntary

Participation is optional. If you decide to take part, you will be given a copy of this information sheet for your records and you will be asked to complete a consent form. If you change your mind at any point during the study, you will be able to withdraw your participation without having to provide a reason.

Anonymity and Confidentiality

I assure you that there is no potential risk or burden associated with this study and that the treatment of your information will be in the strictest confidence. All information, including any audio/ video Skype interviews will be stored on a password-protected computer in order to keep any information that identifies teachers especially the video recordings confidential and to prevent any unauthorised access. Additionally, pseudonyms will be assigned for you that will be used on all research documents.

Interview data will be kept until January 2022 for transcription and analysis and then erased right afterwards. These data including your views and responses will be allowed to be accessed only by the researcher and her supervisor.

You are free to withdraw from the study at any time during data collection and up to two weeks after the data is collected because after that, the researcher will not be able to link the data from interviews to your identity since you are already anonymised.

Storing and using your data

Data will be stored on a password-protected computer in order to prevent any unauthorised access, and they will be only accessible to the researcher and her supervisor. Your views and responses will be quoted extensively, and the provided information will be used only for the purpose of research (e.g. through reports, academic publications and presentations). All the data collected through Skype interviews may be used in anonymous formats in different ways.

Questions or concerns

If you have any questions about the research project or concerns about how your data is being processed, please feel free to contact me by email alem.nihad5@gmail.com or

na991@york.ac.uk , or the Chair of Ethics Committee via email education-research-administrator@york.ac.uk.

 I hope that you will agree to take a part in this research. If you are happy to participate, please complete the form attached and return it to the following emails: alem.nihad5@gmail.com or na991@york.ac.uk

Please keep this information sheet for your own records.

Thank you for taking the time to read this information.

Yours sincerely

Nihad Alem

Exploring the Online Educational Experience of Peer Learning:

The Case of Second Year Algerian Masters Students at Distance

Consent Form

Please tick each box if you agree to participate in this research.

I confirm that I have read and understood the information given to me about the above-named research project.	
I understand that the research will involve Skype interviews and will take approximately 30-40 minutes.	
I understand that participation in this study is voluntary and I may withdraw from this study at any time without having to give an explanation.	
I understand that it will not be possible to remove my data once I have submitted all responses because, the researcher will not be able to link the data to my identity since I am already anonymised.	
I understand that all information about me will not be identifiable and will be treated in strict confidence, and that my name will be replaced by a pseudonym in any presentation or written work.	
I understand that any Skype audio or video recordings of me will be used solely for research purposes and will be erased on completion of data transcription and analysis.	
I understand that my views and responses will be quoted extensively and that I have the right to comment on the transcriptions to ensure the true value of data.	
I understand that your supervisor will also have access to my information and that you will be discussing the progress of your research with your Thesis Advisory Panel.	
I agree to take part in the above study.	

NAME_____SIGNATURE_____

DATE_____

Appendix R: The Consent Form of the Administrative Manager of the Distance Learning Project

Exploring the Online Educational Experience of Peer Learning: The Case of Second Year Algerian Masters Students at Distance

The Consent Form of the Administrative Manager of the Distance Learning Project

To whom it may concern,

I am Nihad Alem, a second-year PhD student from the Education Department at the University of York. I am currently carrying out a research project to understand how the Algerian students enrolled in the masters' distance learning programme can learn from and with their peers by using a peer learning strategy mediated by Skype as a synchronous communication tool.
I am writing to ask for your approval to grant me an access to the students on your online programme via the online platform of the distance learning programme.

For more information, please read this information sheet carefully and let me know if anything is unclear or you would like further information.

Purpose of the study

The study is designed to investigate the Algerian distance learners' experiences and perceptions about learning with their peers verbally and in a synchronous online environment (using Skype), and also to observe how their community of learning will develop through the period of three weeks, six sessions in total and one-hour of virtual discussion each week. I would like to observe students' interactions on your platform and post a recruitment notice that is addressed to the master's students to participate in my research project.

What would this mean for me?

Granting me an access to the online platform of the distance learning programme in your institution is very important to me in order to observe interactions and recruit participants for my research project. The recruitment posting will include information about what this research involves (six sessions of Skype verbal discussions about a topic that students find difficult to understand), how much time they are asked to give (one-hour Skype chat each session) and how

their views and experiences are going to be collected (30-50 minutes of Skype semi-structured interviews to record their learning experiences prior and after the verbal peer learning sessions, Skype video recordings of these discussions and reflective logs to be filled after each session). It is expected that this study will help the distance learners to meet each other virtually, share their ideas and concerns together, and revise topics that they find unclear or difficult to solve alone however, these meetings are not going to cover working on individual marked assignments.

Participation is voluntary

Participation is optional. If students decide to take part, they will be given an information sheet similar to this one for their records and they will be asked to complete a consent form. If they change their mind at any point during the study, they will be able to withdraw their participation without having to provide a reason.

Anonymity and Confidentiality

The students' information will be treated in the strictest confidence. All information, including any audio/ video Skype recordings of the peer learning sessions, Skype interviews, and reflective logs will be stored on a password-protected computer in order to keep any information that identifies students especially the video recordings confidential and to prevent any unauthorised access. Additionally, pseudonyms will be assigned for students that will be used on all research documents. Your institution will not be named in publications or presentations resulting from the study.

Data including recordings of the Skype sessions and interviews will be kept until January 2020 for transcription and analysis and then erased right afterwards. These data including the students' views and responses will be allowed to be accessed only by the researcher and her supervisor.
Students are free to withdraw from the study at any time during data collection. However, it will not be possible to remove their data once they have submitted all responses because, the researcher will not be able to link the data to their identity since they are already anonymised.

Storing and using the students' data

Data will be stored on a password-protected computer in order to prevent any unauthorised access, and they will be only accessible to the researcher and his supervisor. Students' views and responses will be quoted extensively, and the provided information will be used only for

the purpose of research (e.g. through reports, academic publications and presentations). All the data collected through Skype videos/ audio recordings, Skype interviews, and reflective logs may be used in anonymous formats in different ways.

Questions or concerns

If you have any questions about the research project or concerns about how the students' data is being processed, please feel free to contact me by email alem.nihad5@gmail.com or na991@york.ac.uk , or the Chair of Ethics Committee via email education-research-administrator@york.ac.uk.

 I hope that you will agree on granting me an access to the online platform that is designed for the master's distance learners in your institution in order to observe the students' interactions and to post a recruitment notice on the students' discussion board. If you agree, please complete the form attached and return it to the following emails: alem.nihad5@gmail.com or na991@york.ac.uk

Please keep this information sheet for your own records.

Thank you for taking the time to read this information.

Yours sincerely

Nihad Alem

Exploring the Online Educational Experience of Peer Learning:
The Case of Second Year Algerian Masters Students at Distance

Consent Form

Please tick each box if you agree to grant the researcher an access to the online platform of the distance learners in your institution and post a recruitment notice.

I confirm that I have read and understood your request about having access to the DL platform in our institution as a part of the above-named research project.	
I understand that the research will involve Skype interviews with students before and after the Skype peer learning sessions and will take approximately 30-50 minutes, and also six sessions of Skype discussions with peers (one-hour per session) followed by a reflective log that students should fill in after each session.	
I understand that the students' participation in this study is voluntary and they may withdraw from this study at any time without having to give an explanation.	
I understand that it will not be possible to remove the students' data once they have submitted all responses because, the researcher will not be able to link the data to their identity since they are already anonymised.	
I understand that all information about students will not be identifiable and will be treated in strict confidence, and that their name will be replaced by a pseudonym in any presentation or written work.	
I understand that any Skype audio or video recordings of students will be used solely for research purposes and will be erased on completion of data transcription and analysis.	
I understand that students' views and responses will be quoted extensively and that they have the right to comment on the transcriptions to ensure the true value of data.	
I understand that your supervisor will also have access to students' information and that you will be discussing the progress of your research with your Thesis Advisory Panel.	
I agree to grant you an access to the DL platform in order to observe the students' interactions and invite them to participate in the above-named research project.	

NAME_____SIGNATURE_____

DATE_____

Appendix S: Permission Form of the Administrative Manager of the Applied Linguistics Distance Learning Project

استكشاف التجربه التعليميه عبر الإنترنت للتعلم مع الأقران: حاله طلاب الماستر الجزائريين سنه ثانيه عن بعد

نموذج الموافقه

برجى وضع علامه في كل خانه إذا كنت نوافق على منح الباحثه إمكانيه الدخول الى ارضيه التعليم عن بعد في مؤسستك ونشر دعوه للمشاركه في البحث.

X	أؤكد أنني قد قرأت وفهمت طلبك بشأن إمكانيه الوصول إلى المنصة الالكترونيه الخاصة ببرنامج التعليم عن بعد في مؤسستنا كجزء من مشروع البحث المذكور أعلاه.
X	أدرك أن البحث سيتضمن مقابلات عبر السكايب قبل وبعد جلسات السكايب للتعلم مع الأقران وستستغرق حوالي 30-50 دقيقه ، وكذلك ست جلسات من مناقشات عبر السكايب مع الأقران (ساعة واحدة لكل جلسة) متنوعة بسجل عاكس يجب على الطلاب ملؤه بعد كل جلسة.
X	أفهم أن المشاركه في هذه الدراسة طوعية وقد ينسحب الطلاب من هذه الدراسه في أي وقت دون الحاجه إلى تقديم توضيح.

3

X	أدرك أنه لن يكون من الممكن إزالة بيانات الطلبة بمجرد إرسال جميع الردود لأن الباحث لن يكون قادرًا على ربط البيانات بهويتهم لأنهم سي و أن شفرت هويتهم.
X	أدرك أن جميع المعلومات المتعلقه بالطلبة لن تكون قابلة للتعريف وسيتم التعامل معها بسريه تامه ، وسيتم استبدال اسمهم باسم مستعار في أي عرض تقديمي أو عمل مكتوب.
X	أدرك أن أي تسجيلات صوتيه أو فيديو سكايب الخاصه بهم سيتم استخدامها فقط لأغراض البحث وسيتم محوها عند الانتهاء من نسخ البيانات وتحليلها.
X	أدرك أنه سيتم نقل وجهات نظر الطلبة و استجاباتهم بشكل مكتف ولديهم الحق في التعليق على النسخ لضمان القيمة الحقيقية للبيانات.
X	أدرك أن مشرفك سيكون لديه حق الوصول إلى المعلومات الخاصه بالطلبة وأنك سوف تناقش التقدم المحرز في البحث الخاص بك مع الفريق الاستشاري للأطروحة.
X	أوافق على السماح لك بالدخول لارضيه التعليم عن بعد من أجل ملاحظه تعاعلات الطلبه ودعوتهم إلى المشاركه في الدراسه المذكوره أعلاه.

الإسم: ....
.... أحمد سعاد بستانسي ....

الإمضاء: ....

التاريخ: 04/05/1991

جامعة وهران 1 أحمد بن بلة
عميدة كلية الآداب والفنون
(1)
أ. د بستانسي سعاد

Appendix T: Permission Form of the Administrative Manager of the Local Administration Distance Learning Project

Exploring the Online Educational Experience of Peer Learning:

The Case of Second Year Algerian Masters Students at Distance

Consent Form

Please tick each box if you agree to allow the researcher to observe the interactions of the Distance learners on the online platform in your institution and post a recruitment notice.

I confirm that I have read and understood the information given to me about the above-named research project.	✓
I understand that the research will involve skype interviews with students before and after the skype peer learning sessions and will take approximately 30-50 minutes, and also six sessions of skype discussions with peers (one hour per session) followed by a reflective log that students should fill in after each session.	✓
I understand that the students' participation in this study is voluntary and they may withdraw from this study at any time without having to give an explanation.	✓
I understand that it will not be possible to remove the students' data once they have submitted all responses because, the researcher will not be able to link the data to their identity since they are already anonymised.	✓
I understand that all information about students will not be identifiable and will be treated in strict confidence, and that their name will be replaced by a pseudonym in any presentation or written work.	✓
I understand that any skype audio or video recordings of students will be used solely for research purposes and will be erased on completion of data transcription and analysis.	✓
I understand that students' views and responses will be quoted extensively and that they have the right to comment on the transcriptions to ensure the true value of data.	✓
I understand that your supervisor will also have access to students' information and that you will be discussing the progress of your research with your Thesis Advisory Panel.	✓
I agree to allow you to observe the interactions of the distance learners on the online platform and invite them to participate in the above-named research project.	✗

NAME _TACHOUR Abdelhafid_   SIGNATURE _____

DATE _10 / 07 / 2019_

ع.طاشور

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