

Languageing in virtual learning sites

To my beloved family

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GIULIA MESSINA DAHLBERG

Languaging in virtual learning sites
Studies of online encounters in the language-focused classroom

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Abstract

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This thesis focuses upon a series of empirical studies which examine communication and learning in online glocal communities within higher education in Sweden. A recurring theme in the theoretical framework deals with issues of languageing in virtual multimodal environments as well as the making of identity and negotiation of meaning in these settings; analyzing the activity, what people do, in contraposition to the study of how people talk about their activity. The studies arise from netnographic work during two online Italian for Beginners courses offered by a Swedish university. Microanalyses of the interactions occurring through multimodal video-conferencing software are amplified by the study of the courses' organisation of space and time and have allowed for the identification of communicative strategies and interactional patterns in virtual learning sites when participants communicate in a language variety with which they have a limited experience.

The findings from the four studies included in the thesis indicate that students who are part of institutional virtual higher educational settings make use of several resources in order to perform their identity positions inside the group as a way to enrich and nurture the process of communication and learning in this online glocal community. The sociocultural dialogical analyses also shed light on the ways in which participants gathering in discursive technological spaces benefit from the opportunity to go to class without commuting to the physical building of the institution providing the course. This identity position is, thus, both experienced by participants in interaction, and also afforded by the 'spaceless' nature of the online environment.

Keywords: virtual learning sites, synchronous computer mediated communication, languageing, multimodality, sociocultural, dialogical, social interaction, netnography, learning.

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Acknowledgments

It is a rather hot day in May in the beautiful town of Bergamo. As we climb the steep road to reach the old town, I realise that I am wearing the wrong shoes. And that the rolling suitcase I took with me is not suitable for being dragged around during the walk on the stone-covered steps up the hill. After all, we were not supposed to take this uncomfortable path. We had got lost and couldn't find the funicular that would have taken us to our destination, on top of the hill, with no effort. We continue to climb; there is no point in going back now. We talk, in order to forget about the uncomfortable shoes and the bag. After all, we both know how privileged we are to be here, on a beautiful day in May. Neither of us doubts that we will eventually get up to the old town.

My supervisor, Sangeeta Bagga-Gupta was my co-traveller on that day. She had no doubt that we would make it. Her trust in me and my capabilities as a researcher and collaborator has always been a reason for me not to be afraid of finding my own way, in spite of all the doubts and fears that never fail to haunt the head of the inexperienced researcher. Our collaboration over the years has been a source of reflection, inspiration and support that have helped me during the journey. Thank you. My other supervisors, Mats Tegmark and Sylvi Vigmo, have never failed to provide me with the support I needed, be it feedback on a text or a pep talk whenever I felt most challenged and unmotivated. They have been a driving force that has helped me find the way, especially during the last stages of thesis writing. Thank you.

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Finally I am infinitely thankful to all my family. My dear '7 donne' in Falun, my parents Annamaria and Filippo and my brother Livio in Coccinato, my family in Skövde whose support has been unconditional: thank you, Benny and Yvonne and Åsa and Mia. To my children, Erik and Oscar, who are my daily source of joy. To Patrik, the best life companion. The only possible one.

Eventually we made it to the *piazza* in Bergamo. We arrived in spite of my heavy bag and wrong shoes, and the view was fantastic.

Skövde, 10 June 2015

List of the studies

Study I: Messina Dahlberg, G., & Bagga-Gupta, S. (2013). Communication in the virtual classroom in higher education: Linguaging beyond the boundaries of time and space. *Learning, Culture and Social Interaction*, 3(2), 127-142. <http://dx.doi.org/10.1016/j.lcsi.2013.04.003>

Study II: Messina Dahlberg, G., & Bagga-Gupta, S. (2014). Understanding glocal learning spaces. An empirical study of languaging and transmigrant positions in the virtual classroom. *Learning, Media and Technology*, 39(4), 468-487. <http://dx.doi.org/10.1080/17439884.2014.931868>

Study III: Messina Dahlberg, G., & Bagga-Gupta, S. (Accepted June 2015 in the journal *Language Learning and Technology*). Mapping languaging in digital spaces. Literacy practices at borderlands.

Study IV: Messina Dahlberg, G. (manuscript accepted to the *mLearn 2015 conference*). Learning analytics to visually represent the mobility of learners in the language-focused virtual classroom: a multivocal approach.

Note: All papers are reprinted with the authorisation of respective publisher.

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Part 1

1. Introduction

When I first started my job teaching online language courses in 2004, I was sceptical towards the online medium, the online platform on which the courses were held, and the huge amount of work that I soon discovered was needed in order to offer a distance language course of good quality. The synchronous meetings were intended to create a mutual connection between the students and the university providing the course, in spite of the geographical distance existing between them, but I felt like I was drowning in this communication medium. One hour of interaction online felt for me like three hours of face-to-face communication. At the same time, I saw how students became engaged in the interaction: even in these virtual environments there was an attempt to communicate and to create a community, with its boundaries, rules, and shared history. And yet the students probably never actually met in real life.

I am, in this thesis, interested in presenting explorations of what transpires inside¹ a video-conferencing platform in which students of a language-focused course have real-time access to a variety of semiotic resources *as well as* to one another in ways that are not seen as complete when compared to face-to-face interaction. This is crucial for understanding why such encounters have been chosen as the focal point for the analytical gaze in the four empirical studies that are part of this thesis. In fact, people in this virtual environment have only *partial* access to one another. They can hear one another's voices (sometimes with difficulty), they can (sometimes) see each other's faces in webcam images, and they can write to one another using the chat tool available in the environment. The students' presence inside this virtual space is mediated through digital technology. How human presence and participation are framed in a digital network is a much-debated issue both at a pedagogical level and a methodological/analytical one (e.g. Ito, 2008; Castells, 2005; Cousin, 2005 and Engeström, 2007); individuals who want to access educational content that has historically been the prerogative of those who could travel and physically enter the institution providing such content can now achieve this goal without moving at all. Students (and teachers) can stay at home.

¹ The preposition *inside*, rather than *in*, is sometimes used in relation to the virtual classroom, which is in fact not a physical room, in order to emphasize the 'virtual spatiality' of the videoconferencing software. The virtual classroom is used as both a medium and a space in which the synchronous online meetings of the language online courses focused in this thesis are scheduled.

Students can study, as in this case, Italian, online in a course offered by a Swedish university without needing to set their foot in the geopolitical spaces of either Italy or Sweden. Computer-mediated communication (CMC)² allows for such opportunities (and contradictions) to become part of our everyday lives, and therefore, further research from an interactional perspective is urgently needed in order to understand the complexities of online learning and instruction across sites, where alternative patterns of communication, participation and learning are likely to emerge (Bliss & Säljö, 1999; Lamy & Hampel, 2007; Säljö, 2010).

Furthermore, the technological innovations of recent decades have made possible widespread access to educational content and to other people who share the same need for mobility (or immobility) during online synchronous meetings (Lankshear & Knobel, 2011; Buckingham Shum & Ferguson, 2012). This thesis is concerned with analytically describing and understanding such encounters and the ways in which they are shaped in relation to the institutional agenda of a beginner course, in a language variety other than English, in what I call the virtual learning space of the ‘language-focused classroom’. Students who take online courses are offered the possibility of engaging in communication wherever they go, without worrying about logistical issues. They can be *there*, all at the same time, even if they are scattered all around the world³; and *there* is the screen of the technological interface we are using. What do *here* and *there*

² In this thesis, CMC refers to communication mediated by some kind of digital technology; e.g., computer, tablet, telephone, and synchronous computer-mediated communication (SCMC) refers to communication that occurs in the kind of multimodal environment afforded by, for example, the videoconferencing program Adobe Connect. SCMC is also widely used in the field of CMC to refer to technology-mediated synchronous communication.

³ This does not mean, however, that such openness and accessibility to CMC and the internet is a general global prerogative. In Study II, included in this thesis, we have discussed access to educational content through an internet connection both in terms of a digital ramp but also in terms of a barrier. A European identity position, i.e., passport, *or* the payment of high fees constitute formal requirements for participating in Swedish university courses. Also, stable internet access is not an opportunity that all people have access to globally, not least in regard to educational content, both institutional and non-institutional. We discuss these issues further in Messina Dahlberg and Bagga-Gupta (2015) in terms of learning as access and learning as participation. Samuelsson (2014) describes a situation of digital (in)equality in the geopolitical spaces of Sweden by mapping the use of ICT among children and youth in school settings.

mean in the virtual classroom? What are the differences between CMC and *face-to-face communication*⁴?

If face-to-face interaction is not available, students and teachers will use the interactional strategies afforded in the online environment in order to negotiate meaning and participation as well as their roles inside the virtual classroom: “unlike everyday embodiment, there is no digital corporeality without articulation. One cannot simply “be” online: one must make one’s presence visible through explicit and structured actions” (boyd, 2007: 145). Understanding what these ‘explicit and structured actions’ mean in SCMC, especially in relation to institutionally framed agendas of a language course, is one of the common interests that pull together the four studies (Studies I-IV) that, in tandem with this introductory section Part 1, constitute this thesis.

The students and teachers whose interaction is analysed in the studies that are part of this thesis all engage in SCMC and meet inside a video-conferencing program to deal with different tasks and to communicate with one another in the target language. They never meet in a physical room. The video-conferencing program thus is not only a place to meet, it is also the virtual classroom where the participants in the course co-construct their positions as students and teachers, experts and novices. How can the interaction that takes place in the virtual classroom, where different modalities are afforded, be represented, described and understood? How do participants in an online course negotiate the management of boundaries across communities as well as space and time dimensions, or, in other words, the fact that they attend the meeting when *at the same time* they are still immersed in their home environments or other physical locations far from the institution providing the course?

As a way to further develop and legitimise the study of the issues and ideas that were the initial fuel for this thesis and the studies that are part

⁴ This question is not to be the main issue in the research project of which this thesis is a part. Nevertheless, it is difficult not to address it at all. Here, it becomes interesting to compare communication where body and voice are partially excluded with face-to-face communication (or communication *in real life*). Furthermore, face-to-face communication is not the only established mode of communication either, since telephone conversations have been possible since the beginning of the 20th century. See also Hutchby (2001).

of it, a project called CINLE⁵ (Studies of Communication and Identity processes in Netbased Learning Environments) was established. It was envisaged as a collaborative effort among a number of scholars, including myself, who wanted to engage in the issues and areas of interest of the project. Thus the thesis and the project have at times been mutually dependent on one another. However, the thesis and CINLE have also lived separate lives in terms of the activities and the outcomes of such activities in the form of published work. A number of conferences and symposia have also been organised within the CINLE project. These have resulted in publications which cannot be accounted for in the limited space of this thesis Part 1. Thus, although this thesis is an independent work, CINLE can be seen as the home and the wider context to which this text has regularly returned as it was being written.

This thesis, with the four studies that constitute it, aims at creating possibilities for reflection on SCMC and learning. I am not immersed in the practice in an active role of teacher or instructor who also assesses the students. My relationship to the students is as a researcher, and the aim of the project is first of all analytically descriptive, rather than prescriptive. In this sense I am not trying to look for answers to normative questions to begin with, but I hope that the analytical mapping of online interaction presented in the four studies that are part of this thesis will shed light upon the complex world of SCMC and online learning. I especially think of my colleagues who are language teachers at upper secondary schools and universities; I hope this work will help them to put online education into perspective and to start a discussion about technology in their work.

⁵ CINLE: Studies of Communication and Identity processes in Net-based Learning Environments is the larger research context that frames the four studies which constitute this thesis. The CINLE project started in 2010 and shares, but is not limited to, the theoretical frames, research questions and issues in the studies included in this thesis. CINLE is a joint project that includes a number of collaborators. The four studies included in this thesis are all results of the work within CINLE; three of these studies are co-authored with Sangeeta Bagga-Gupta, who is both a collaborator in the CINLE project as well as my supervisor. The work in CINLE has also resulted thus far in a number of journal articles, book contributions, conference papers and symposia which have not been included in this thesis. See the Appendix for more information about the CINLE project and the complete publication list.

Thesis aim and research questions

The main aim of the thesis is to contribute towards an understanding of the complexity of students' interaction and their activity of *linguaging*⁶, i.e. the multiple discursive practices of people in online synchronous environments from an empirically pushed theoretical framing. The focus of the thesis, as well as a recurring theme in the theoretical framework, are issues of languaging in virtual sites as well as the making of identity and negotiation of meaning in these multimodal settings. A central aspect is the analysis of the activity, what people do, in contraposition to the study of how people talk about their activity. This aim is achieved by examining and answering four questions:

- A. What are the communicative strategies (including the range of tools and infrastructures that are involved) employed by students and teachers and, more specifically, what are the ways in which institutional learning activities are negotiated within the constraints and opportunities of virtual settings?
- B. What are the kinds of interactional patterns that arise in virtual institutional settings and how are these related to students' and teachers' literacy practices (both online and offline) as well as to processes of time and space co-construction in synchronous computer-mediated communication?
- C. What are the ways in which participants' subject positioning becomes salient in micro-scales of interaction in relation to the institutionally framed agendas of the online language course?
- D. In what ways are participants' learning opportunities made visible in virtual settings, in terms of the kinds of social and cognitive aspects that are enacted through the use of synchronous computer-mediated communication and in relation to language-focused issues?

The specific aims of the four studies included in this thesis are subordinated to these foci. These four questions or key issues constitute the amalgams of problems and areas of interest that have been studied in the four

⁶ The term *linguaging* is taken up in greater detail in Chapter 3 of Part 1.

contributions included in the thesis. Two central areas of interest and the main objects of inquiry in the four studies can be conceptualised as follows. Firstly, the central theme of this thesis is the study of communication and languaging (i.e., language use) in the virtual classroom. Secondly, as the studies developed over the years, and in the process of data creation and analysis, it became clear that a more general approach to learning and communication was necessary. Thus data analysis needed to go beyond the original interest in language learning. In addition, I realised that participants in the online course focused upon in the four studies were not only engaged in language learning: they were engaged in language learning in and across virtual institutional settings. Therefore, the studies that are included in the thesis all focus on languaging in virtual learning sites at a general level, but every study investigates more specific issues whose thematic directions have been planned in relation to the publication sites of the different studies.

Methodologically, one contribution of the project is the creation of a representational system that attends to the complexity of the interaction occurring in online environments that are multimodal and where more than one language variety is used (see Chapter 4), by applying an analytical focus on social interaction to study the communication situation in what I call *virtual learning sites*.

Thesis overview

This thesis consists of two parts. In Part 1, which is the extended abstract, I account for the theoretical framings, including an account of some relevant studies on computer-mediated educational settings, and the methodological considerations that frame the series of empirical studies which are presented in their entirety in Part 2. Part 1 also includes a short summary of the four studies and an overview of their main results (Chapter 5).

All four research questions (A-D above) are addressed in Study I, which deals with the communicative strategies that are played out in the environment, by the participants, and how these are afforded or constrained in the kind of context where visual access to body and gaze are partially curtailed. Study II also investigates the situated communication which occurs when students engage in a common task, but it also focuses on the prerogative of an online space to become the setting where what it means to ‘be’ from one country or ‘speak’ a language, has implications for how the participants make sense of each other and the task at hand as well as their identity as ‘online students’. Study III further develops the dynamics

of interaction as outlined in studies I and II in order to investigate how communication is organised in terms of different constellations that frame the literacy practices of the online encounters (questions A-B). The interaction order can take different kinds of turns, depending on whether or not the encounters are teacher-led and on what kind of role the participants play during the meetings. The different constellations, and the interactional patterns that are allowed by/in them, also have implications for what it means to become a group in these kinds of virtual learning spaces. Study IV provides a theoretical/methodological contribution that builds on the previous studies as well as pushes their findings further. Here, the focus lies on tracing the interactional patterns (question B) that, in turn, can be used to identify the moments in which students engage with shifts in focus that can potentially contribute to novel insights from the part of the students, and thus, I argue, to critical moments in which learning is nurtured.

In order to position my research in relation to the field of language learning and SCMC, in Chapter 2 I briefly account for how technology and the concept of 'distance' in distance education has been framed in national reports across two decades in relation to online education as a global phenomenon today. I present in Chapter 3 the theoretical background of this thesis and the central concepts that frame the different studies including a review of some relevant studies related to the research interests in the thesis. The ethnographic and interactional basis of the research are outlined in Chapter 4, with the presentation of the empirical material as well as some examples of the analytical representations from Studies I-IV. Chapter 4 also addresses methodological and ethical issues related to the use of online ethnography. Chapter 5 is an outline of the studies, with a summary of the included papers followed by a further discussion of the results in relation to the thesis aim.

2. Technology and (online) education

The belief in technology as a panacea for learning has been on the agenda of policy makers (as well as researchers in the area of educational technology) since the beginning of the last century⁷. As a counterpoint, Selwyn argues instead in favour of the adoption of an “avowedly critical and—above all—pessimistic perspective” (2011: 714) on technology in education. Selwyn thus advances an approach that takes technology as not inherently likely to bring advancements in education, but rather as an approach that takes technology *as it is*: “educational technology scholarship should look beyond questions on how technology *could* and *should* be used and instead ask questions about how technology is actually being used in practice” (Selwyn, 2011: 715, emphasis in original). The four studies that, together with Part 1, constitute this thesis are intended to contribute to such scholarship. They all aim at problematizing the view of technology as educational panacea as part of a research tradition that sees technology as not been accepted and implemented quite so smoothly in the school arena (Cole & Derry, 2005; Cuban, 1986; Erixon, 2010; Säljö, 2010), through the analysis of what participants do with the resources

⁷ In her historical overview of the implementation of technological innovation over the past century with the illustrative title *De la Belle Époque à Second Life*, Lindberg (2013) discusses the tensions that arise in the attempt to merge a positivist approach to the study of technology to a humanist perspective that accounts for the philosophical, historical and artistic positions to which technological representations and innovations are strictly bound.

they have at hand when engaging in so-called ‘distance’ education⁸. In the empirically pushed studies that form the basis of this thesis, digital technology is what *de facto* brings together the students and the teachers involved in the online language courses.

Technologies afford participants the possibility to meet without leaving their homes or whatever other physical setting they are participating from. As I have suggested earlier, this shift from students moving to the educational institution providing the course towards making the institution enter students’ private spheres is relevant in relation to the aim and questions raised in this thesis. More specifically, synchronous meetings are of particular analytical interest when seen in relation to the focus of this thesis, which deals with the study of languaging in virtual learning sites⁹. In other words, the focus lies on the study of how language *is used* in con-

⁸ Salaberry (2001) provides an interesting historical overview of how the use of different technologies in language learning have been reported on and analysed in the *Modern Language Journal* since 1918 and concludes with the following final remarks: “a healthy dose of scepticism about the pedagogical effectiveness of many current technological tools appears to be well justified if one considers the perhaps overly enthusiastic reaction to previous technological breakthroughs” (2001: 52). More recently, Sauro (2011) investigates the role of synchronous computer-mediated communication (SCMC) for language learning. In her research synthesis, Sauro offers an overview of the articles in the area of SCMC that deal with the evaluation of this communication medium and language learning from the beginning of the 1990s. Twenty-two studies (out of 97) dealt with “sociocultural and discourse analytic SLA [Second Language Acquisition] to explore the development of sociopragmatics and the form and use of speech acts and participant roles” (Sauro, 2011: 382). Only 11 studies dealt with the use of specific tools for “maintaining coherence across multiple tools and conversations” (Sauro, 2011: 382). Kern opts for the metaphor of internet as pharmakon, “presenting both a promise and a challenge” (2014: 354). Kern thus rejects the view of technology as a panacea “for although it can provide contact with people around the world, it does nothing to ensure successful communication with them” (Kern, 2014: 354).

⁹ The issue of how synchronous communication may affect students’ participation in online discussion is also addressed by Hrastinski (2007), focusing on two dimensions of online student participation: *personal participation* and *cognitive participation*. The result of the empirical studies conducted within Hrastinski’s research project shows that synchronous communication (in this case instant messaging) can be used to support personal participation and as a complement in asynchronous communication for dealing with issues with a lower degree of complexity (where asynchronous communication seems better suited to this purpose).

texts of institutional SCMC, more specifically on how language varieties, including modalities, are negotiated in relation to the institutionally framed agenda of the course, as well as to identity positions the participants orient towards during the encounters. Shaping participants' communication in terms of *linguaging* means that focus lies on the use that participants make of the semiotic resources they have at hand, be it in one, two or several language varieties and modalities in the shared space of the virtual classroom. This is what the present thesis is particularly interested in.

In this section I briefly illustrate the ways in which this shift has occurred, with an overview of some Swedish national reports over the past twenty years. This will, it is suggested, contribute towards a greater understanding of how the concepts of 'distance', 'presence' and 'dialogue' as well as 'education for all' were and continue to be central in the policy documents and in the discourse about distance education. This, I argue, is important in order to frame participants' positions socioculturally as (im)mobile learners in Study II and to understand how this position is topicalized in talk by participants during the encounters focused upon in all studies (I-IV).

Year 1994: A picture from the past, a view of the future

Jonas who studies German

Ring, ring... Jonas turns in his bed and looks at his TV screen, which he forgot to switch off the previous evening. On the screen he sees a message blinking from his fellow student Pelle. The TV has been Jonas's friend since he started to attend university courses and bought his portable personal computer, which he connected to the TV-screen in his room. Here he could watch basketball games and manage a large part of his school assignments. The TV is connected to the university network via the TV cable company.

[...]

Jonas connects to a pronunciation course and opens a video window next to the text window. He starts the pronunciation exercise and stops the dialogue from time to time to repeat words and sentences he has difficulties with. He compares his pronunciation with the videoclip and repeats it until he is satisfied. On one occasion he stops the dialogue and introduces a comment and a note directly related to the issue at hand. Then, Jonas opens the draft he is working on for his German essay about European trade. He sees that his supervisor has added comments at the margins.

[...]

The seminar is led by a teacher in the university town. The participants congregate from four different locations to take part in the discussion [...] the so-called split-screen technique is used and all students can see one another and the teacher. Jonas is happy with this course....

Figure 1: Account of a possible future in the Swedish report on New Information Technology in Education (Utbildningsdepartementet, 1994): *Jonas som läser tyska*¹⁰.

¹⁰ All translations from the Swedish original in Chapter 2 are my own.

Ring, ring... Jonas vänder sig i sängen och tittar på TV-skärmen han glömt att stänga av kvällen innan. På skärmen ser han ett meddelande från sin studiekamrat Pelle blinka fram. Tv-apparaten har under studietiden blivit Jonas vän – ända sedan han började läsa universitetskurser och inhandlade sin bärbara persondator som han kopplade upp mot TV-skärmen i sitt rum. Här kunde han nu se basketbollmatcherna, följa nyhetsprogrammen och klara av en stor del av sina hemläxor. TV:n är via kabel-TV-bolagets nät kopplad till universitetsdatornät.

[...] Jonas kopplar in sig på uttalskursen och öppnar ett videofönster vid sidan om textfönster. Han börjar sin uttalskonversation och stoppar dialogen då och då för att repetera ord och meningar han har problem med. Han jämför sitt uttal med videoavsnittets och upprepar det tills han är nöjd. Vid ett tillfälle stoppar han dialogen och lägger in en egen kommentar och minnesanteckning i direktanslutning till problemmomentet. Jonas tar därefter fram det utkast han håller på med för sin tyska uppsats om europeisk handel. Han finner att hans handledare lagt in kommentarer i marginalen.

Figure 1 describes one possible future of distance education, as imagined in a Swedish report from 1994. The report, with the title 'Ny Informationsteknologi i Undervisningen' [New Information Technology in Education], was part of a project led by the Swedish Ministry of Education called 'Agenda 2000 – kunskap och kompetens för nästa århundrade' [Agenda 2000: knowledge and competence for the next century] in 1994. Kari Marklund, the author of the report, accounts for the 'new' in the field of information technology, two decades ago. A contemporary reading of the report reveals the accuracy of her visions of the future. In a chapter called 'Bärbarhet och rörlighet' [Portability and mobility], Marklund highlights the greater *individual* mobility allowed by such a 'new' information technology:

In recent years, technological innovation has provided opportunities for larger individual mobility [...] Being able to personalize the information-bearing device and giving it back its mobility, so that one can take it along to the beach, means that an increasing number of people can make use of new information technology ¹¹.

(Utbildningsdepartementet, 1994: 20)

Such an emphasis on the possibilities that technology allows for individuals in society is also clear in the description of a fictive distance student (see Figure 1). Marklund attempts to create a vignette of an independent language student, who wants to have control over his/her time, space and, thus, mobility. This is possible by means of technology; in fact, the vignette highlights what the affordances of technology are capable of doing in terms of constant contact with the university providing the course, with fellow students, and not least with the teacher and the course materials. Everything is mediated by technology; the information flow is fast and accessible. Students can meet in groups and they can see and hear each other. In the future illustrated in Marklund's description, students do not

[...]Seminariet leds av en lärare på universitetsorten. Seminariedeltagarna är samlade på fyra olika platser för att delta på diskussion [...] S.k. splitscreentechnik används och alla elever kan se varandra och läraren.

Jonas är nöjd med kursen...

¹¹ Under ett antal år har den tekniska utvecklingen givit möjligheter till större individuell rörlighet. [...] Att kunna personalisera informationsbäraren och återge bärbarheten till den, så att man även kan ta med sig den till badstranden, kommer att innebära att allt fler tar till sig den nya informationstekniken.

need to travel to the physical location of the university; they can meet via 'teleconferencing'. These meetings are seen as crucial in Marklund's description of future education in the 2000s. In all examples of possible futures provided in Marklund's account, students and teachers have access to information through TV, radio and of course the 'net'. Technology works well and becomes invisible or as Marklund puts it (writing about the so-called virtual reality): "Instead of keyboard and mouse, humans' most natural way to communicate will be through sound, movement and touch. The medium disappears and is not perceived at all"¹² (Utbildningsdepartementet, 1994: 19). Communication, in such an account, is mediated by technological tools which are framed as invisible, since, in an idealised future like the one invoked in Marklund's report, they never fail to do what they should, namely to mediate both visual and auditory information, pictures, and documents. What Marklund's vignette also brings to the fore, and what becomes interesting for present purposes, is the issue of connecting the student to the broader community of fellow learners engaged in the same course, using a technology that enables synchronous communication. This is seen as a crucial aspect of distance education in all reports that have been studied for this brief overview, but is also a concern of the teachers and students who participate in the online language course focused on in Studies I-IV included in this thesis. Indeed, how to make students meet and feel a sense of belonging to the educational institution where the course is offered, in spite of its distance mode of teaching, has been a major concern for the teachers planning these courses since their first attempts in 2001. Students are not singularities; they are part of a bigger context. I return to this issue in further detail in the next chapter when I deal with the concept of social learning.

¹² Istället för tangentbord och mus kommer människans naturliga sätt att kommunicera med ljud, rörelse och beröring att involveras. Mediet försvinner och uppfattas helt enkelt inte.

‘Bridging the distance’¹³ is a popular phrase used in relation to online education and clearly points to the fact that technology mediated communication in educational contexts entails a measure of incompleteness, as compared to face-to-face communication, which the field of distance education sees as in need of further scrutiny. I suggest that the empirical analysis carried out in Studies I-IV offers a meticulous description of how language learners and teachers manage to ‘bridge the distance’ in their everyday work in the virtual classroom. In the next sub-section, the concept of ‘distance’ in relation to education is discussed further.

What is ‘distance’ in education?

The term ‘distance’, often used together with ‘education’ or ‘course’ continues to be widely used in the public domain, by students, institutions and in policy documents and evaluations in the geopolitical spaces of Sweden. An understanding of the concept of ‘distance’ as a context of study, from the backdrop of policy documents, is also relevant as a background to the analysis of students and teachers in the four studies included here, where issues of flexibility in time and space, as well as access, become central. However, from my perspective, providing a definition of the concept in absolute terms is fruitless, since it needs to be framed in relation to the situation in which it is used. The understanding of distance is relative on two levels, depending on i) the perspective one chooses to take (distant from/to what?), and ii) the sociocultural understanding of distance, in relation to closeness. These and other related issues are discussed in the introductory section of the Swedish report from 1992, ‘Far away and very close: A pre-study on Swedish distance education’ [Långt borta och mycket nära – En förstudie om svensk distansutbildning] (Utbildningsdeparte-

¹³ Bridging the distance seems to be the main concern of a short ‘instructional guide’ from 1978, with the title: *Bridging the Distance. An Instructional Guide to Teleconferencing* (Monson, 1978). In this short handbook, suggestions are provided for instructors, course coordinators, etc. on how to ‘humanize’ the techniques used to provide synchronous two-way communication among students and instructors. Monson highlights that the use of humanizing techniques will “let individuals know that, although separated from you by great distances, their needs are important” (Monson, 1978: 2). Some examples of these techniques are the use of welcome letters before the first meeting in the course, the use of proper names with the course participants and the suggestions of ‘being yourself’ i.e. trying to form a mental picture of what it could be like to sit next to the students and talk directly to them rather than to an invisible audience ‘out there’ (Monson, 1978).

mentet, 1992). Here, emphasis is put on accounting for the somewhat slippery character of the notion of distance; however, there is a claim for a need to account for the object of study, and thus a definition of distance is framed as being necessary.

Distance education is characterised by the fact that the student acquires knowledge and skills independent of time and place, and it has two main components, namely the teaching material and the opportunity for dialogue¹⁴.

(Utbildningsdepartementet, 1992: 19)

Two aspects are central to the report's definition above on the connection of time and space in relation to distance. Firstly, being far away from one another implies flexibility in space but also in time, in relation to the fact that participants in distance education do not need (according to the definition in the report) to meet at a given place and time. Secondly, the aspect of communication and dialogue is emphasised in the last part of the quote. Distance education is viewed as in need of containing both aspects of learning and instruction: the teaching material and the possibility of having a dialogue. This, in turn, implies a view of pedagogy that emphasises communication as an important factor in regard to learning and instruction, a view that will continue to permeate discussions on education at the political level, in both school and higher educational contexts. In the report (Utbildningsdepartementet, 1992), distance education is often, in fact, a blend of 'close' and 'distance' education in which participants regularly meet in a specific physical place. However, important aspects that shape 'distance' are the 'pedagogical methods' used rather than how far participants are from one another. In order to bridge the distance and enhance autonomy, it is believed that teaching materials need to be designed and offered in such a way that they facilitate control, in the form of supervision and socialization with scheduled meetings in so-called learning centres (Utbildningsdepartementet, 1992). Thus, the classroom as a physical space, the interaction that transpires within such a space and the ways of preparing and maximizing the effect of the scheduled meetings seem to be the main concerns in the two reports from 1992 and in Marklund's report from 1994.

¹⁴ Distansutbildning kännetecknas av att den studerande tillägnar sig kunskaper och färdigheter oberoende av tid och rum och den innehåller två huvudkomponenter, nämligen ett undervisande material och en dialogmöjlighet.

The delivery of message and content together with interaction are seen as one of the two key elements in education in a later report from 1998 (DUKOM¹⁵, 1998) as well. The meaning of interaction here is framed in different terms, drawing on the work of Moore (1989) on distance education: interaction among peers, with the course teacher and with the content. Moore's theory on transactional distance¹⁶ has been influential on the ways that reports from the 1990s and the beginning of the 2000s have constructed their theoretical frames (see also Fåhraeus & Jonsson, 2002). The dialogic and conversational nature of communication with a didactic purpose is also used to theoretically frame interaction in the reports. This also draws upon Holmberg's theory of *guided didactic conversation* then modified in *teaching learning conversation* (2003: 42). According to Holmberg: "The stronger the students' feelings of personal relations with the supporting organization and of being personally involved with the learning matter, the stronger the motivation and the more effective the learning" (2003: 44). Holmberg claims that the informal register of language among the students, teachers and the educational institution providing the course enhances student motivation and the feeling of being part of a community that shares the same plan, as far as the studies and course goals are concerned (Holmberg, 1995: 48).

Distance, i.e., the simple fact of not sharing the same physical spaces during the time frame of the course, is thus seen both as a possibility in terms of flexibility and autonomy for the students, and as a problematic issue in light of a view of pedagogy that values interaction and dialogue as indispensable ingredients in the learning process. This is an important aspect that, from the beginning of my career as a language teacher in online courses, guided my interest in understanding how students and teachers managed intense communication situations in terms of the semi-otic resources, including language varieties and modalities, mediated through digital technology. This issue is further accounted for in the following chapter and is a central concern in all four studies included in Part 2.

¹⁵ Distansutbildningskommitté [Committee for Distance Education].

¹⁶ Moore's theory of transactional distance argues for the existence of a strong correlation between structure, interaction and autonomy in an online learning community and how this influences the feeling of being a part of that community (1997).

Technology (in terms of personal computers and connection to the internet) is envisioned as some sort of futuristic fantasy far away from the reality described in the report from 1992 (Utbildningsdepartementet, 1992). In the DUKOM report from 1998) technology is defined in terms of IT (information technology) even though it is emphasized that what IT does in fact, in distance education, is to create possibilities for communication, adding another dimension to the use of technology (besides the delivery of information), which is framed as ‘relationsstödjande’ [facilitating relationships] (DUKOM, 1998: 70). In fact, the issue at stake for the DUKOM report (1998) seems to be a mundane general concern shared by most of the aspects of the planning, studying and implementation of distance education, i.e.: how can participants be there at the same time as they are in fact in different locations? Technology has contributed to the creation of new spaces for learning and instruction (DUKOM, 1998) in order to confront the burning issue of presence, of *being there*, through and with technology.

Framing distance in terms of flexibility in time and space highlights two aspects that seem very closely related in distance education reports and that also nurture the orientation of such an educational form towards adult education, rather than in K-12 contexts. In their review of research on distance education from 2002 with the illustrative title ‘Distansundervisning: mode eller möjlighet för ungdomsgymnasiet’ [Distance Education: Fashion or Facility in Upper-Secondary Schools], commissioned by the Swedish National Board of Education (Skolverket), Fåhræus and Jonsson report on the lack of research on distance education in upper-secondary-school settings. They claim that distance education, from correspondence courses to 21st century digital technology, has usually attracted

students from groups in society¹⁷ for which education was not an easy choice. Indeed, one of the most important reasons why distance education has been implemented in Sweden *tout court* has been to educate the masses and thus to enhance the level of competitiveness of the nation as a whole in a European as well as global context. This is also emphasised in the report, ‘Kunskapens Krona’ [The crown of knowledge] (Utbildningsdepartementet, 1993). Two decades later, there is still a lack of understanding of the impact that distance education could have for students in K-12, who, according to Fåhraeus and Jonsson (2002), do not have the same opportunities to choose their own path of studies as adults do. This is also highlighted in later reports on the same topic (Skolverket 2008; Utbildningsdepartementet, 2012), where distance education is indeed seen as a

¹⁷ In Fåhraeus and Jonsson’s report, the individuals that have constituted these groups are historically framed in terms of belonging to families in which the doors of education were not open for a range of reasons. These were usually related to the fact that members of the family, including children, had to support their family income by working. For example, Fåhraeus and Jonsson report that ‘statens skola för vuxna’ [the national school for adult students] started i Norrköping in 1956: “Den riktade sig då främst till dem som haft svårigheter att fullfölja normala läroverksstudier, t. ex. till följd av sjukdom, ekonomiska svårigheter eller försörjningsplikt” (Fåhraeus & Jonsson, 2002: 63). “[This school] primarily addressed those who have had difficulties in completing the regular school programs, e.g. due to illness, economic difficulties or a duty to provide for their family”]. From the 1990s there has been a shift towards offering higher educational courses for similar reasons: “[d]e studerande är ofta kvinnor 36-40 år, boende på landsbygden med man och små barn, gymnasium i botten. Varken de själva, föräldrar eller syskon har någon tidigare högskoleerfarenhet. Många arbetar hel- eller deltid parallellt med studierna. De studerar för att höja kompetensen så att de får behålla eller kan söka ett bättre arbete”. (Fåhraeus & Jonsson, 2002: 65). [“Students are often women aged 36-40, they live in the countryside with a husband and young children, with an upper secondary education at the bottom. They do not have, and neither have their parents or siblings, any earlier experience of higher education. Many combine full or part time jobs with their studies. They study to raise their competence in order to keep their jobs or to look for better opportunities”].

possible solution in K-12 contexts to include groups of students¹⁸ who would otherwise be out of reach for a variety of reasons, or to offer courses who would not have been available because of the minimum number of students in them could not be reached (Skolverket 2008; Utbildningsdepartementet 2012). Also in these later reports, a struggle continues to frame the meaning of what distance education is, and why it should be implemented¹⁹, with arguments that go beyond a simple technological determinism that sees technological innovation as the solution to general issues on quality in learning and instruction and to educate a larger population of learners. In fact, in Utbildningsdepartementet (2012), technology is seen as the only possibility for offering distance education to youngsters, since the communication media afforded by technology are what make contact between student and teacher possible. The latter is seen as a crucial factor because it is framed as a *sine qua non* condition for managing the so-called ‘värdegrundsarbete’ [transmissions of values], which is one of the missions that all schools are supposed to work on, according to the national school curricula in K-12 contexts. Thus, in view of the experience of implementing distance education within higher educational contexts, the report draws the conclusion that such an educational form could be a viable option in K-12 school settings as well (Utbildningsdepartementet, 2012). What is of particular interest for the aim of this thesis and the educational implications of the four studies that are included in it, is that the Skolverket report on distance education in K-12 context from 2008 specifically frames the opportunities for distance education and lan-

¹⁸ In K-12 context the individuals who avail themselves of the opportunity to access courses via distance education consist of groups of young people who have been diagnosed with medical and/or psycho-social issues, for whom the ordinary extra resources present in the school physical setting are insufficient (for example individuals at risk for infections or allergies or with social phobias [Utbildningsdepartementet: 2012]). Moreover, pupils who are holders of Swedish national passports living outside of Sweden’s geopolitical borders are offered distance courses, mostly in Swedish. Other groups include pupils who combine studies with their commitment to professional-level sports or pupils who require a faster pace of study (Utbildningsdepartementet, 2012). This framing of groups for whom distance education may open doors which otherwise would have been kept closed is accounted for similarly in the Skolverket report from 2008.

¹⁹ They refer here to Desmond Keegan (1990) via the previous report Utbildningsdepartementet (1998). In addition, reference is also made to a volume by Göran Larsson, from 2004, ‘Från klassrum till cyberspace’ [From classroom to cyberspace] in order to define distance in distance education.

guage courses (in relation to ‘språkkurser’, i.e., the so-called Modern Languages and ‘modersmålundervisning’, [mother-tongue education]) in terms of suggesting that such courses may be offered when schools do not have the resources to organise and offer them within the regular face-to-face program. However, these options are seen as augmenting the established forms of ‘close’ education, rather than an alternative. In other words, they are still seen as options that can be offered only when the ‘close’ education choice cannot be made for different reasons. At the time of writing, distance education is still not considered as an equal alternative to existing courses in close education and it remains an option only for courses with special requirements which need the distance format to reach a wider population of learners (which is often the case with language courses in language varieties other than English) or groups with ‘special needs’ (see above and footnotes 16 and 17), rather than being open to everyone.

Summary

From the account of a number of national reports ranging over the last two decades provided in this chapter, it is clear that distance education in the geopolitical spaces of Sweden has been framed in terms of ‘education for all’, i.e., a way to reach, include and educate individuals who could otherwise not have been able to take advantage of educational opportunities in their lives. This was seen, especially during the 90s, as the main argument for implementing distance education in Sweden, along with a faith in the future and in technological innovations, although this previously positive orientation toward technology became less clear in the reports from the first decade of the 2000s. These later reports build upon the experiences of over a decade of distance education implemented at universities as well as on the reports of some attempts made in schools settings.

Two aspects become salient for the argument I wish to make here. Firstly, distance education requires a much higher degree of discipline and effort on the part of students compared to ‘close’ education, which becomes one of the trademarks of distance education *tout court*. This is due to the lack of contact or proximity in distance education between the students and the physical bodies of the institutions providing the educational content (including rooms, teachers *and* course materials). Secondly, flexibility in time and space allows for a considerably higher degree of inclusion for those who are not in a position, for different reasons, to physically reach the institutions offering the course. What is missing in the reports

is a critical stance on how the affordances and constraints in distance education come to be seen in those terms. This is another contribution that the studies presented in this thesis attempt to make, by focusing the analytical gaze in participants' *doing of* (or usage of) language, technology, space and time and how they are framed both by the institutional agenda of the course and the semiotic resources available in the online environment in which the synchronous meetings of the courses are scheduled (studies I-IV).

3. Learning in the 21st century

Being inside the virtual classroom and only engaging in CMC to interact within the learning community means that teachers and students adjust to the media and artefacts that are being used: “When technologies change, so does the nature of human thinking and learning and so do our practices” (Bliss & Säljö, 1999: 8). This means that learning in the 21st century is understood in terms of a relationship of mutual interdependence between human agency, socially organized activities and technology (Ludvigsen et al., 2011). The implication of this argument is that it is neither fruitful nor interesting to identify the source of social transformation change vis à vis technological innovations since they are here seen as complementary. Castells goes one step further in this direction and claims that “we know that technology does not determine society: it *is* society” (2005: 3). We could replace the noun *society* with *participation* or *learning*, and the sentence would still highlight the inextricable relationship that exists between technology and its users, in ways that shape an activity or a process in regards to its norms and rules as well as its spatial and temporal boundaries.

The epistemological and ontological positioning of the four studies originates from the assumption that social interaction is conceptualized as the locus in which to seek the answers to the research interests of the thesis. More specifically, it is the ‘doing of’ communication and learning *in situ*, i.e., in the everyday life of the members of the community and the space focused on in the four studies, that this thesis attempts to understand and unravel. The choice to focus the analytical gaze on social interaction mediated by digital technology in an institutional, higher educational context originates from an understanding of learning and participation as inseparable and equally important components that can be studied *as they transpire in interaction*, rather than studied *as accounts of* an activity.

The areas of interest in each of the four studies deal with the study of communicative patterns and strategies, participants’ subject positioning and the learning opportunities that are at hand and that get topicalized in interaction. The fact that the focus of the thesis lies on communication mediated through some sort of digital artefact is central since my scientific argument as well as analytical point of departure in this thesis is that the mediational means used to facilitate interaction has a bearing on how the latter is likely to unfold in terms of constraints and affordances for the participants.

In this chapter, I argue for these positions more in detail by outlining the theoretical background of the thesis, starting with a general overview of an understanding of the human mind as inherently social. The chapter continues focusing on the central concepts and ideas used in the four studies to frame the analysis of the empirical data. The final part of this chapter surveys some relevant scholarship on SCMC in relation to the general interests as well as the key issues of the research, both at an overarching level and in regard to the foci in each of the studies included in this work (see Chapter 5 for a summary of each study).

Hybrid minds

A central tenet in this thesis is that human cognition has developed out of the evolutionary force of the brain to socialize, to be with other human beings and ultimately, to communicate. The work of Donald (2001) on the conceptualization of minds as hybrid is relevant for present purposes because it points towards an understanding of the human mind as socially embedded. This means that access to symbolic cultural systems like language has made human minds hybrid: “half analogizers, with direct experience of the world, and half symbolizers, embedded in a cultural world” (Donald, 2001: 157). Donald defines *aware* access to memory as a crucial step in human evolution and it is evidence of the tight connection between mind and culture. We consciously remember because we have access to a symbolic cultural system. In a way, culture becomes the link between the sensory cognitive system of the brain and the symbolic one. This hybrid mind, Donald suggests (2001) is what makes human beings unique because, unlike any other species, humans can use both modes, and, indeed, the one cannot do without the other. Sociocultural research (like the one carried out in this thesis) aims at understanding how the mind manages this hybridity through a central process called *mediation*, i.e., “the use of symbolic tools, or signs, to mediate and regulate our relationships with others and ourselves and thus change the nature of these relationships” (Lantolf, 2000: 1).

The four studies that constitute this thesis all share an interest in observing, describing and interpreting human activities as they unfold in the everyday lives of the people that have been part in them. To begin with, this thesis is not interested in creating abstract models or to distill people’s lives into the “elementary components” (Luria, 1979: 173) of the phenomena under scrutiny. Rather, the thesis is interested in the study of phenomena *because of* their richness and complexity. More specifically, the

thesis searches for answers to questions about people's use of different discursive-technological tools (Bagga-Gupta, 2004) to make meaning when they are in specific (online) settings, dealing with certain tasks.

Towards a de-centralized mindset: analytical implications

During the first decades of the 20th century, the focus of the study of human development shifted from the organism, the 'machine' or the 'mind' of the individual, to the analysis of what is occurring between the individual and the rest of society. Wertsch succinctly uses the metaphor of the *copyright age* when describing the unit and focus of the analysis in the human sciences in terms of a centralized mindset (1998). Drawing on Frye (1957), and to exemplify his argument, Wertsch describes the supremacy accorded to the human mind during the creative act of a painter or a poet, as if they produce their work *ex nihilo* (Wertsch, 1998). This means that the sociohistorical context is not accounted for, and thus neglected, in the analysis of human behavior. Wertsch and other scholars (e.g. Hutchins [1995]; Resnick [1994] and Rogoff [1990]) argue instead in favor of a shift towards a de-centralized mindset, where analytic efforts are put on the individual in interaction with tools, thus taking mediated action as the unit of analysis (Wertsch, 1998). In the work of the Soviet psychologist Lev Semyonovich Vygotsky, a sociocultural perspective on human development affirms a symbiotic relationship between thought and the use of language and other semiotic resources. Culture and language then, emerge out of *social practices* where individuals have access to tools and infrastructures that allow them to participate in these practices in meaningful ways (Bliss & Säljö, 2011). Furthermore, language, as the tools of tools (Vygotsky, 1978), allows human beings to negotiate and appropriate the ways-of-being of the community they are members of (Bagga-Gupta, 2013).

Thus, what people *do* with the resources they have at hand is crucial: rather than studying why people act in one way or another, the analytical focus of this thesis lies on the activities of human beings across space and time. This is the central issue that all four studies deal with in order to reach a deeper understanding of the ways in which the space of the virtual classroom and the institutional frame of the online course affect participants' attempts to understand one another, in a language variety with which they have very limited experience.

I have, in this section, argued for an analytical focus on the performance of individuals in interaction with tools, *in situ* and across time, thus

acknowledging a view of the human mind and cognition as socioculturally embedded. The conceptualization of the mind as hybrid, it is suggested, also helps clarify the impact and consequences that the use of a range of discursive-technological tools has on social interaction (and ultimately learning) in institutional settings like the one examined in this thesis.

Social learning, or access to *shared practice* through technology

The ability to access large amounts of information has had huge repercussions on how we think about learning and instruction. The concept of *social learning* used by Lankshear and Knobel (2011) and Buckingham Shum and Ferguson (2012) frames an understanding of learning as a process that occurs in and through social interaction. While their take on social learning clearly stems from a Vygotskian perspective, what is interesting for the aim and key issues of this thesis is how the concept of social learning (in the kind of online environments like the one examined in studies I-IV) emphasises access not only to educational content but to *other people* who share similar interests in that content: “It is within and through shared practice that meanings—significance—ideas, categories, evidence, tools, tests, techniques, and all the other things that *constitute* knowledge come into being” (Lankshear & Knobel, 2011: 218).

However, shaping (and (re)searching) environments in which a shared and collaborative practice is implemented can be a challenge for both (educational) social platform designers and educational institutions. The study of such challenges is one of the main interests in computer-supported collaborative learning (CSCL) research (see for example Suthers et al., 2010; Suthers & Rosen, 2011 and Suthers et al., 2013). Nevertheless social learning, and its extension, *online* social learning, is also interested in the “non-academic contexts in which it may take place (including the home, social network, and workplace) and the use of free, ready-to-hand online tools, with no neatly packaged curriculum or signed-up peer cohort” (Buckingham Shum & Ferguson, 2012: 9), thus adding an important dimension in the scholarship of CSCL. Study IV aims at creating a deeper understanding of the theoretical construct of online social learning by (re)thinking the previous analysis conducted in studies I, II and III in terms of how the activities of *people-in-concert-with-tools* (Wertsch, 1998; Bagga-Gupta, 2015) unfold by creating analytics (in this case social learning analytics) that visually represent the movement of people and tools in dialogue with one another. This, I argue, allows for the analysis of when

and how a change in the interactional pattern may be the result (or the cause) of a learning activity.

Bliss and Säljö refer to the symbiotic nature of interaction between individuals, tools and artefacts and social practices: “we shall be striving to develop a new theoretical framework which can account for, and thus attempt to explain, the nature of this interaction in order to better understand the role of context and situation in thinking, learning and reasoning” (1999: 10). This thesis is an attempt to make a contribution to the study of synchronous computer-mediated communication.

A critical perspective on language and language learning

From a sociocultural-dialogical perspective, the focus has shifted from the individuals to their interaction, no longer merely *who* they are, but in addition, *what* is going on, and *how* are individuals languaging? The same shift has occurred in the study of language. Language is understood as a tool for meaning-making, and in this thesis the analysis is focused on such negotiations among individuals in order to find answers to the research questions posed. Language, like identity, is not seen as an internalized set of rules or an autonomous cognitive skill that lies within the brain of the individual. Going from noun to verb, the term loses a part of its abstractness: languaging refers thus to the multiple discursive practices of people (Garcia, 2009; 2010). This shift has also had important implications for the notions of bilingualism as well as literacy/-ies: “[i]nstead of focusing upon competencies of individual human beings in one or more symbolic codes, be it oral, written or signed linguistic conventions, language use (including reading and writing) is seen as representing ways of relating to reality” (Bagga-Gupta, 2002: 562).

Adhering to the concept of languaging has a bearing on the ways in which language learning and language ideology are critically investigated in the studies that are part of this thesis. Such a scientific position means that language as a discrete system of rules (e.g. the ‘Italian language’), is understood as bearing a strict connection to notions of nation/state and the political power that different geopolitical areas wanted to establish to create a stable community of speakers, and thus of homogenized citizens. Pennycook suggests that “[l]anguages are no more pre-given identities that preexist our linguistic performances than are gendered or ethnic identities. Rather, they are the sedimented products of repeated acts of identity” (Pennycook, 2004: 15). Makoni and Pennycook (2007) go even further, claiming that languages are an invention and that indeed language and

nation were constructed together: “many structures, systems and constructs such as traditions, history and ethnicity [...] are inventions of a very specific ideological apparatus” (Makoni & Pennycook, 2007: 9). The notion of the invention of languages is strictly related to the concept of imagined communities by Anderson (1991) i.e., the ways in which nations are imagined and the dialectical processes (with language) of invention and construction.

Furthermore, the notion of ‘a’ language in an autonomous, discrete manner (i.e., Italian is *not* French and vice versa) makes little sense when dealing with the study of languaging in terms of the discursive practices of individuals in which they make use of a whole range of semiotic resources and linguistic repertoires to negotiate meaning. In this way of thinking, these resources and repertoires are, in fact, no longer considered separately. If language is seen as a by-product of communication and not the other way around, this view “no longer isolates language from other social behaviors and semiotic systems, allowing for a broader approach to multimodality” (Pennycook, 2004: 6). In other words, this view entails an understanding of languaging as *a part of* communication, rather than *apart from* it as in the case of the study of language as a discrete system separate from its communicative aspect. To conclude, a critical view of what constitutes language learning is in line with an understanding of languaging as a performative act, thus “challenging the centrality of competence (underlying system) over performance” (Pennycook, 2004: 15).

Thus, a dialogical-performativity approach (which I account for in further detail in the section called ‘Approaching the study of SCMC dialogically’) has been fruitful in the four studies included in this thesis to illustrate the fallacy of thinking in terms of ‘skills’ and of ‘performance’ when it comes to language use and language learning in situated, everyday settings. The Chomskyan dichotomy of *competence* and *performance* (about content) enacted in and through *social (inter-)action* is at the core of what is investigated in the four studies. However, this is relevant only in relation to the fact that the three concepts above cannot be treated as separate units, in line with our understanding of a de-centralized mindset (or hybrid mind) as well as with our analytical focus on human-mediated action.

The key issues in this thesis deal with the study of languaging mediated by technology during an online language course. The course participants work in order to achieve the goals set by themselves and the course syllabus to become more competent users of the language variety known as Italian. However, this thesis, and the four studies that constitute it, does

not answer questions of whether the students succeed in this direction. What this thesis does address and answer is what the learners *do* (i.e., their languaging activities) when they engage in learning practices that are institutionally framed with the resources they have at hand. Furthermore, when addressing issues of language learning in and through computer-mediated communication (CMC), it becomes even more important to adopt critical lenses; issues of linguistic territorialization in which ‘a’ language is linked to a specific geopolitical, physical space need to be reconsidered in light of the (dis)placement and fluidity that are given characteristics of online (educational) settings (see also Kramsch 2011; Liddicoat, 2011, Malinowski & Kramsch, 2013).

Local-chaining, languaging and literacy practices

An important cultural tool that has been useful in addressing the thesis aim of understanding participants’ languaging activities in virtual sites is the empirically grounded notion of *local-chaining* (see Study I). Bagga-Gupta (2002) frames the meaning of local-chaining in terms of multimodal, multilingual languaging in participants’ simultaneous use of the language varieties Swedish Sign Language, oral Swedish, written Swedish and finger-spelled words. The term local-chaining has recently emerged in the fields of literacy studies and Deaf studies and captures the complexity that derives from the use of different language varieties, modalities (visual, gestural, proximal) and conventions (see also Gynne & Bagga-Gupta, 2013, Holmström, 2013; Bagga-Gupta & St John, 2015 and Tapio, 2013). Studies I and II account for similar phenomena, where participants use a range of language varieties and modalities to communicate in the virtual classroom. They do this using the resources they have at hand, and at times one mode is used to compensate for the lack of physical proximity and also as a way to stress parts of the oral talk by transliteration in the written mode.

In synchronous computer-mediated communication (SCMC), a main issue concerns how to theorise and account for the constant local-chaining of written and spoken words. More specifically, in our data set this is accomplished using a range of language varieties. Another concept that we have used in the analysis of SCMC to account for similar phenomena is *translanguaging*. Originally, this term was used to describe how pupils in multilingual contexts deal with the alternation of a range of language varieties during classroom activities (e.g. Williams, 1996). Garcia broadens the term to refer to multiple discursive practices “in which bilinguals engage

in order to make sense of their bilingual worlds” (Garcia, 2009: 45), and where there no longer are “clear-cut boundaries between the languages” (2009: 46) in a hierarchical manner, but rather a language continuum that is accessed (see also Bailey, 2012; Yoxsimer Paulsrud, 2014). Translanguaging is in line with a conceptualization of language and communication as *social practices* rather than discrete systems that are kept apart from each other (compare with code-switching). It refers primarily to a continuum between languages, but it also encompasses the fluid use of a variety of modes, i.e., spoken and written or signed and written (a phenomenon which we refer to as “transmodality”²⁰ in Study II). These complex language practices can be facilitated when communication is technology-mediated, since online settings enable people to engage in many different language practices at the same time and this, according to Garcia, implies “a measure of ‘agency’ that did not exist prior to the technological revolution” (2009: 29). In a similar vein, and relevant in the study of multimodal online communication, the term multiliteracies (Hornberger, 2003: 49) refers to the ability of human beings to use and make sense of a variety of communication channels and media such as audio, video or other semiotic systems. In placing the biliteracy framework on a continuum²¹, Hornberger illustrates what a pedagogy of multiliteracies is about: “it is designing in the sense of making/taking meaning from available designs to create new transformed designs [...]. Available designs include grammar [...] and orders of discourse, and we redesign these in the same way we make/take meaning from text/discourses to create new texts/discourses” (2003: 49). I interpret this as the effort of teachers and learners to facilitate discourse using the media that they have at hand. It

²⁰ In relation to the field of critical applied linguistics, Pennycook (2004) discusses his preference for transmodality, rather than multimodality, to highlight how modalities are used in an integrated manner, rather than seen in the co-occurrence of modalities.

²¹ The concept of continuum opens up for an understanding of bilingualism and biliteracy in all their complexity. The nested systems of continua in context, development and media show that the possibility of intersection in the infinite points along the continuum are to be considered not as a point in itself, but in connection with the others in the continuum. This means that it is no longer an option to consider language learning as a system that dictates its own rules. It is the learning situation, the context of language use, that is the deciding factor (Hornberger, 2003: 18, see also the notion of *bilingual lexical interillumination* in St John [2010] and Davies for a discussion about *the native speaker* [2003]).

can be a whiteboard, paper, gestures, or different communication channels in an online environment. The framework thus becomes a pedagogical tool as well.

In their discussion about new literacies, Lankshear and Knobel (2011) frame digital literacies in terms of the range of skills and competences that the 21st –century literate person should master²²; more specifically, there seems to be a focus on the capability of performing different tasks at the same time (multitasking). Similarly, the term *transliteracy*, a concept that stems from the field of media studies, refers to “the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks” (Thomas et al. 2007, [online resource only, page not available]). What is interesting in the way that Thomas et al. use the concept of transliteracy is their emphasis on the non-novelty of the phenomenon, which “reaches back to the very beginning of culture” (2007). This critical stance towards what is seen as new because of its digital format is in line with our critical (or pessimistic) view of technology as the creator of processes that are, in fact, not inherently new, but, rather, particular to our culture, or, as I discussed earlier, of our hybrid minds. Thus, in studies III and IV there has been a shift in the use of the glossed concepts of multi/transliteracy and translanguaging in favour of literacy/literacy practices and languaging. This shift was generated by a (re)thinking during the analysis of the participants’ activities in the virtual classroom across time and space. While the prefixes in *multi*-lingualism and *trans*-languaging are important, from a theoretical perspective, in marking the post-modern and de-colonial endeavour of critically discussing communication and

²² Säljö, in line with this reasoning, describes literacy as currently “used as a synonym for expressions such as knowledge, competence and learning” (2012: 6).

language in times of transitions²³, we came to the conclusion that languaging and (digital) literacy practices are analytical apertures which, together with the empirically grounded notion of chaining, offer tools that support the analytical descriptive endeavour of this thesis. I argue that this terminology (even when deprived of the prefixes), can point towards a conceptualisation of literacy as skills, competence and learning “mediated through technology that lies outside the human body, i.e., through inscriptions and various kinds of technologies” (Säljö, 2012: 6) that emphasises the mobile, integrated patterns of behaviours that are both *simultaneous* and *chained*. As Leandri and Neumann put it, there is a need for a mobile sociology of education that sheds light on “the material conditions of the circulation of people, things, objects and ideas” (Leandri & Neumann, 2014: 2). Thus, a further concern emerged during the process of data creation and analysis in the studies, which is that the focus should lie on understanding how such multiple literacy practices occur in an integrate manner across modalities and language varieties, and how this multiplicity of literacy practices is not a result of the technological medium *per se*, but rather a result of the institutional as well as the collaborative nature of the practices that unfold during the encounters (see e.g. Creese & Blackledge, 2010).

(Re)thinking globalization and online communities

Blommaert (2008) offers us a perspective on emerging geocultural processes in which language and language events are dislocated from a fixed position in time and space (2008: 21). Globalization, in Blommaert’s

²³ Multilingualism is a gloss term that refers to a range of practices in which several language varieties are used in the same space, be it within the boundary of a national state or within the four walls of a classroom. The concept is used both at policy level, e.g. by the Council of Europe, and in linguistic anthropology (see for instance Makihara, 2010). It is not burdened with language ideologies about a hierarchal relationship among language varieties (Cummins, 2005; Garcia, 2010; Yoxsimer Paulsrud, 2014). However I argue that multilingualism still rests on the theorisation of language as one (or several) systems that can be mastered in an *additive* or *subtractive* manner rather than focusing on the communicative patterns that can be found in the interaction among individuals using a range of language varieties. Canagarajah interestingly argues that “the term multilingual doesn’t accommodate the dynamic interaction between languages and communities envisioned by translingual” (Canagarajah, 2013: 7).

account, means that sociolinguistically the world has not become a village, but rather a network of villages, connected in rather unexpected and unpredictable ways. Far from being a new phenomenon, globalization is now a speeding process that cannot pass unnoticed. We are surrounded by semiotic resources, including language, that have both global and local dimensions. Locality powerfully frames the organisation of meanings of signs that have become mobile yet retain a strong sense of the local. This is a consequence of geocultural processes of globalization.

Taking online courses is an example of globalization, or rather, as outlined in Study II, of *glocalization*. In Study II it was fruitful to highlight how local and global dimensions interpenetrate each other in ways that are unpredictable. The use of the term glocalization helps in forefronting the movement of people, semiotic resources, and artefacts across time and space, or, in other words, a mobile sociology of education, as mentioned above (see Leandri & Neumann, 2014). It is a methodological concept, but most of all, a theoretical one. The concept of glocality is used by Hampton (2010), who argues that “(s)tudies of the Internet often ignore the role of physical place and context in everyday life, and studies of ecological context often ignore that a variety of media (old and new) can be used to form and maintain social ties” (2010: 3). Thus glocality, as an analytical aperture, adds an important dimension to the study of online encounters, by attending to the *pieces of locality* (see Study II and Messina Dahlberg & Bagga-Gupta, 2015) that enter the space of the virtual classroom and shape and are shaped in the interaction among the participants. The concept of glocality also brings to the fore issues of boundaries, which are methodological/analytical, in terms of defining the field and the unit of analysis (see Chapter 4), as well as ontological, since the participants take part in activities in the course, but they also need to negotiate the context(s) in which they are physically located. This has repercussions on the ways in which the group of students, in interaction with the mediational means they have at hand, has been conceptualized in the studies that are part of this thesis. Studies I and II started with the concept of socialization/participation in communities of practice, moving to a shift in focus towards the analysis of the co-construction of time and space in and across such communities that are now forefronted in terms of *spaces* (see also the discussion below about a shift in focus towards the interactional space in the virtual learning site).

Glocal communities and virtual sites: dimensions of TimeSpace

The term ‘community’ is both ubiquitous and complex, as Thorne (2011) reminds us. And yet, community is probably the most used construct “to conceptualize, and refer to, groups of people that cohere in some way” (Thorne, 2011: 304). Studies I and II are no exceptions to Thorne’s observation: in Study I, the group of students and teachers in the online language course are conceptualized in terms of a community of practice and in Study II of glocal communities (see discussion in the previous subsection above), where the focus lies on understanding the trajectories of participation of the members of that community.

Participation, negotiation of meaning and reification

Lave and Wenger (1991) describe the concept of communities of practice (henceforth CoP) as the relations between newcomers and old-timers in a situated activity. Individuals who want to become members of a CoP do so by following trajectories that will lead them from peripheral to full participation: “participation is always based on situated negotiation and renegotiation of meaning in the world” (1991: 51). Apprenticeship implies a kind of trajectory in the community. The implication of this scientific position is that acquiring full *participation* is also a matter of gaining legitimacy during the learning trajectory: “learning to become a legitimate participant in a community involves learning how to talk (and be silent) in the manner of the full participants” (Lave & Wenger, 1991: 107-109), i.e., learning the norms and rules of the community (see Study I).

The term *participation* implies a sense of taking part in the CoP, but also “the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises. Participation in this sense is both personal and social” (Wenger, 1998: 55-56) and it shapes the experience of meaning, becoming a source of identity. Participation is a social experience not because several people are interacting at the same time, but because social participation gives meaning to our life. Even when we are thinking silently, we always have to relate to others, to the communities we belong to. This is in line with a Bakhtinian conceptualization of activities as dialogical processes which “proliferate in any complexly represented discursive space” (Clifford, 1986: 15) and which I account for below.

Issues of boundaries, locality and space

The boundaries of a specific CoP are both fluid and diffuse (see Study II). Membership and socialization from peripheral to so-called full participation implies shifts in positionality, a phenomenon that is one of the analytical foci in studies I and II. It is thus possible to define a geography of practice where: “relations of proximity and distance may facilitate or hinder learning” (Wenger, 1998: 130).

The issue of locality for communities of practice is an interesting aspect as far as the level of analysis covered by CoP is concerned: neither a specific interaction, nor a whole nation, culture or city can be viewed as a CoP. The former would be given too much importance, overlooking broader communities in time and among people. The latter would miss “crucial discontinuities among the various localities where relevant learning takes place” (1998: 125). But how can a CoP be defined? Not by its members, according to Wenger, who instead offers a list of characteristics that indicate the existence of a CoP; “shared ways of engaging in doing things together; mutually defining identities; local lore, shared stories, inside jokes, knowing laughter; a shared discourse reflecting a certain perspective on the world”, among others (1998: 125-126).

The fact that the CoP cannot be reified implies that it is difficult to seize their form, their real shape. And indeed CoPs “are about content – about learning as a living experience of negotiating meaning – not about form” (Wenger, 1998: 229). While the theoretical framework provided by the

CoP has been a valuable tool for analysing the negotiation of meaning²⁴ in a learner community and the dynamics that occur when moving from peripheral to full participation, I argue that using the CoP as a tool to conceptualize and analyse learning practices on-the-go (see Study II) implies certain limitations. Considering a group of students in such online educational arenas like the language course focused on in the four studies as a CoP a priori, means to reify it, to create it artificially at the table, and while this could be understood in terms of an analytical move, it could also prevent the analysts from developing alternative understandings of the phenomenon in focus.

Consequently, in the following sub-section, I provide alternative understandings of the notion of community and situated practices. The Goffmanian notions of encounters and focused gatherings are central aspects that need to be considered in the present study, as well as Gee's concept of affinity spaces. The notions of group, space and movement, need to be re-considered when dealing with institutional online virtual spaces like the one focused on in this thesis.

²⁴ Following a CoP conceptualization, meaning is not seen as just the relation between a sign and its reference in Saussurean terms, but it is embedded in the practice as experience of everyday life. The negotiation of meaning is the location of the process of meaning through participation and reification (Wenger, 1998: 52). Reification means literally "making into a thing" (Wenger, 1998: 58) and defines the process of making a procedure, a tool, where a certain understanding is given form. Such tools are created through the process of reification: "(a)ny community of practice produces abstractions, tools, symbols, stories, terms and concepts that reify something of that practice in a congealed form" (1998: 59) so that it can be re-utilized. Thus, in such a line of thought, processes of reification are unfolding both for the analyst who attempts to understand a social practice within the community of scholars of which he/she is a part, but they also occur in the community in focus in the research. The process and products of reification exist in the human condition of negotiation of meaning. In Study I the three concepts outlined above (negotiation of meaning, participation and reification) are used in relation to identity formation (see also question C in the introduction), to how the co-construction of different identity positions is an in-situ endeavour, and are strictly linked to the specific context in which interaction transpires.

Group and space

As the process of compiling this thesis and the studies that are part of it progressed, the conceptualization of the group of individuals and their digitally-mediated interaction in terms of a community of practice was not sufficient as an analytical framing in regard to two issues. Firstly the community that was in focus was neither static nor homogeneous as the ones studied in Lave and Wenger's ethnographies were. Secondly, and in relation to the first issue, membership and legitimate participation are difficult to account for when dealing with the distributed and fractured ecologies (Luff et al., 2003) of online communities like the one examined in the four studies included in this thesis. Even though issues of socialization, mutual engagement and negotiation of meaning remain central analytical constructs in studies I and II, to study a group that exclusively meets online, focusing on a community that, as outlined in Study III, is both here and there, now and then, anywhere at any time implies theoretical as well as analytical limitations. In Study II the community is framed in terms of a *glocal community*, in order to attend to the issue of fragmentation vis à vis the blurriness of boundaries that seems to be one of the most compelling characteristics of CMC²⁵.

A further dimension to this dislocation in time and space brought by the concept of glocality is added by shifting the focus from the *group* towards the *space*. Gee efficiently does this by framing interaction in terms of *semiotic social space* or *affinity space* (Gee, 2005). Gee claims that issues of participation, membership and boundaries are problematic in Lave and Wenger's conceptualization of a community. Communities need to be labeled, according to Gee (2005), in order to identify the members of such communities. Who is in, and who is out? This could be an intricate matter to solve in today's fluid and hybrid spaces, which are a mixture of real and virtual (Gee, 2005). This is facilitated by the advent of digital technology: "[m]odern technologies allow the creation of more and more spaces where people can enter and interact with others (and with objects and tools) at a distance" (Gee, 2005: 216). In Gee's account, it is more fruitful to conceptualize the participants in an activity that one wants to investigate in terms of the *space* they occupy (both real and/or digital). The classroom where people *are situated*, and not the group or community, becomes the focus

²⁵ Some of the characteristics of CMC are accounted for in the subsection below called *Multimodality, embodiment and mediation in computer-mediated communication*.

of attention now. Such a space entails a set of features the participants are aware of, such as portals, generators, internal and external grammar. I will not go further in outlining the features of Gee's social semiotic spaces and affinity spaces. It is adequate at this stage to acknowledge that space (which is also endowed with sets of norms and rules), rather than community, entered the landscape of the analytical tools used in the studies included in this thesis, in order to be able to answer the questions we raise in the CINLE project as a whole and in the data sets focused upon in the four studies included in this thesis. This shift in focus also meant that the *moment*²⁶ was foregrounded more clearly from Study II onwards. It is also possible to analyse how space and time mutually shape one another by focusing on the order of interaction (Goffman, 1967) as it unfolds in an encounter. Thus, the focus lies now not just on a moment or a sequence of moments in the interaction, but also on the ways in which these moments are organized by participants to fit within the work of an institutional online course (see Studies II & IV). Not only space, but also time, becomes very important in this context.

Focused gatherings and mobility

The Goffmanian concept of *focused gatherings* (Goffman, 1961) illustrates individuals' encounters, and highlights a central idea that helps unravel the issue of what is being studied: groups, communities or spaces. Such a key specification guides the focus of the analysis and claims the following: it is not the study of a group that interests us, but rather the ways in which the encounters unfold, the patterns, the encounter in itself and the participants in that particular meeting or set of meetings. Even though the encounters may occur because the participants are members of a community, what Goffman highlights (1961) is that those participants are also members of other groups and that this is relevant when issues of identity positions are forefronted. Or, as the well-renowned quote has it: "(n)ot [...] men and their moments. Rather moments and their men" (Goffman, 1967: 3), thus emphasising the shift in focus from the individual to the fluid and evanescent quality of encounters "created by arrivals and killed by departures" (Goffman, 1967: 2). Indeed, the participants in the online language course examined in the studies not only *come* from different communities, they also continue to be physically *located* within the spaces of the separate

²⁶ See also Li Wei (2011) for a discussion about translanguaging spaces and moment analysis.

communities that they are part of *during* the encounters of the language course. All encounters (including those which are digitally-mediated) are organised according to patterns and rules that are created in interaction.

Goodwin describes the tension that exists between rules that are set locally to accomplish situated communicative endeavours, and the recognition of talk-in-interaction as the core activity going on in most institutions (Goodwin, 2003: 110). In his study of a man affected by aphasia who can only master a limited set of semiotic resources, Goodwin highlights how the man's family relies upon their common understanding of the past to make sense of the present. One single gesture, or gaze, becomes meaningful because of the shared history of the group in which the situated interaction occurs. Thus space and time, as the context of interaction, blur and are used to create meaning in the here-and-now of the situated encounter. It is in this sense that the study of TimeSpace as a single dimension (as in Study III) becomes relevant in pinpointing the interactional patterns where individuals take part in institutional encounters, as well as in trying to identify how strategies that are used to make meaning in one specific encounter are re-used in other situations, becoming part of the discursive practice in the virtual learning site (see key issues A & B in the introduction).

The (re)organisation of space and time in the virtual classroom

Studies I and III deal with analyses on different scales of interaction to highlight how the shared space of the virtual classroom is, in fact, co-constructed in talk by participants. Space and time are then dimensions that both obey the laws of physics *and* are created by and through interaction: time and space (along with language) become verbs, *spacing* and *timing*, since they are shaped and negotiated in the moment-by-moment interaction: "spacing and timing as actions, verbs rather than nouns, thus pointing to the ways in which they are performative rather than simply existing as properties of the world to be left unexamined" (Edwards, 2012: 208). Furthermore, these two dimensions are no longer conceptualised in terms of separate and different units. Edwards refers to school timetables and how they frame the organisation of both space and time to explain them as inseparable and interactively relational aspects of the world in social theory (Edwards, 2012). If you pull one string, the other one moves too.

Studies I and III analyse the (re)organisation of space and time in the virtual classroom not only by describing what the environment offers in

terms of affordances for the participants. I argue that the analyses across scales also, and more interestingly, offers insights in the ways in which participants shape (and are shaped by) how the meetings are organised in relation to the institutionally framed agenda of the course in terms of, e.g., who gets the floor, which language variety has the highest currency and what mode is employed for what purpose in a particular moment in time (see also issues A & B in the Introduction). A conceptualisation of TimeSpace as a single and performative dimension has been fruitful in gaining a deeper understanding of what sort of spaces virtual learning sites are (see also Messina Dahlberg & Bagga-Gupta, 2015). Nevertheless, my interest lies in empirically mapping and examining the ‘power geometries of everyday life’ (Massey, 2004 cited in Edwards, 2012) and to challenge the notion of virtual learning sites as a simulacrum of the classroom as a container in favour of “a nexus-like perspective” (Leander et al., 2010: 332) in which information, tools and resources come into the space of the virtual classroom from every direction (see also Thomas et al., 2007). Thus we are back to the idea of network, and this is inevitable, I argue, since it is a powerful metaphor that can illustrate the complexity and richness of our wired lives. What this means, both theoretically and methodologically, is that an approach that focuses on participants’ activities at different scales is needed in order to index how virtual learning sites are enacted moment-by-moment, before venturing to provide more overarching explanations of the phenomena in focus (as in studies III & IV).

Approaching the study of synchronous computer-mediated communication dialogically

According to Bakhtin (1981; 1986), thoughts and opinions about the world are likely to come to the surface in the interaction between two or more participants, through dialogue and in the tension that is created by what is being said during the dialogue. It is in such a living, tension-filled interaction that dialogue takes form and thus it is relevant to analyse utterances as an activity of orchestration by the agent who produces the utterance and the mediational means that afford and/or constrain the communicative project (Linell, 2009). In a similar vein, Schegloff (1996) describes an utterance as interdependent with its interactional past and possible future, in the form of next utterances. Scholars²⁷ in the field of ethnomethodology (EM) and conversation analysis (CA) aim to under-

²⁷ See, for instance, the work of Sacks and colleagues (Sacks et al., 1974).

stand discourse in the local sequentiality of situated interaction in terms of utterances' retrospective dependence, their focus on the present and their projections towards possible future(s). Thus, using EM and CA as analytical apertures can contribute towards a dialogical understanding of human sense-making in the sense that participants in conversation have the responsibility to respond to one another. Such a view entails a conceptualization of discourse as a situated activity, accomplished by drawing on the resources that are at hand and focusing on the interlocking links that are constitutive parts of the interaction. The assumption underlying a dialogical approach is that the mind very often makes sense in interaction with other people as well as with other material cognitive artefacts in the world (computers, books, calculators etc.). Such a focus on interaction, as performed in the everyday life of individuals, stems from a take on dialogism as an attempt to understand the world-out-there, which can only be understood and appropriated dialogically (Linell, 2009). The hybrid mind I referred to previously is conceptualized in terms of a sense-making system that processes the world by means of affordances, i.e., through conceptual and symbolic resources. Affordances are, following ecological psychologists like Gibson (1979) and Hodges (2007), embedded in the environment and perceived and understood as meaningful by individuals. The concept of affordance, as used in the studies included in this thesis, does not simply refer to a thing in the world. An affordance is a sign in the sense that it takes on a meaning that we, as human beings, can understand and use for our purposes. This implies 'semiotic work' as outlined by Kress (2010); i.e., such affordances become signs by and through the interpretive community in which social interaction unfolds (see also Säljö 2012 for a similar discussion in relation to literacy). Participants 'see' the object as a potential tool for enhancing the completion of the task at hand, or as an opportunity to communicate (see also van Lier, 2004; 2010). Without this understanding of the tool, it is not a tool anymore, only a thing that is included in the environment. Such an understanding is, according to Linell, the impact of language and culture (Linell, 2009) and the road that will take us away from a centralized mindset, as previously outlined in relation to the act of creativity of an artist *ex-nihilo*.

Multimodality and computer-mediated communication

It is in the attempt to generate a deeper understanding of how the process of mediation shapes learning that issue D was added to the questions to which this thesis aims at providing some answers. The understanding of the mediating tools, or semiotic resources, as affordances is strictly connected to the understanding of computer-mediated communication, in the context of video-conferencing focused upon in studies I-IV, as *multimodal*.

Multimodality is an analytical approach that “starts from the position that all modes, like speech and writing, consist of sets of semiotic resources [...]. From this perspective, the modes and semiotic resources a person chooses (or are permitted) to use shape communication and meaning” (Jewitt, 2011: 2). A mode is culturally shaped and made, thus making a shift from an essentialistic understanding of human communication and language as activities that occur in a sociocultural vacuum: “modes are shaped by the daily social interaction of people. It is these that multimodal analysts call *modes*” (Jewitt, 2011: 21). All studies (I-IV) included in this thesis deal with multimodality in the sense that they share an interest in understanding how semiotic resources are continuously made and re-made according to participants’ needs in situated encounters:

Resources are constantly remade; never willfully, arbitrarily, anarchically, but precisely, in line with what I need [...] Semiotic resources are socially made and therefore carry the discernible regularities of social occasion, events and hence a certain stability; they are never fixed, let alone rigidly fixed.

(Kress, 2010: 8)

This thesis aims at creating a greater understanding of how the modes afforded in the virtual classroom of the online Italian course are used, shaped and re-used to negotiate meaning, and how these are chained in order to support meaning-making when the lack of visual access between interlocutors is a constraining factor in the communication situation.

In addition, it is interesting for the purposes of this thesis to discuss Clark’s position on the ontology of hybrid minds as outlined in Donald (2001). What Clark assumes is that we are natural-born cyborgs, i.e., that we are in a position in which supremacy is given to the connections of body and mind with technology (in its many forms, and not necessarily digital, see also Wertsch [1998]). It is against this background that I consider processes of (dis)embodiment of primary importance when dealing

with the analysis and understanding of people's languaging in online communities. Clark emphasises the importance of the body in a context of CMC, for example, because it is in such contexts that the impact of the body in communication can be better understood and where more complex (or varied) opportunities to languaging or 'being-with-words' arise (Bagga-Gupta, 2013). In the next and final sub-section in this chapter, before moving forward to the methodological considerations, I explain this claim further by positioning the areas of interest and the key issues of this thesis in relation to relevant scholarship on computer-mediated communication.

Multimodality, embodiment and mediation in computer-mediated communication

When one part of the whole is missing, its meaning, which was previously taken for granted, becomes suddenly very clear to us. This, as it were, is what happens when individuals have limited access to one another's body in communication (as in SCMC). In a similar vein, and as Turkle already emphasised twenty years ago, the study of life on the screen only helps us to better understand processes of identity formation in terms of difference, multiplicity, heterogeneity, and fragmentation which mark a post-modern conceptualization of the self *tout court*, and not only of interaction taking place in virtual spaces (Turkle, 1995). Thus identity, in such a line of thinking, is always seen in terms of ways-with-words (Heath, 1983) and ways-of-being-with-words (Bagga-Gupta, 2013; 2014a and 2014b) in the interaction *in situ*, i.e., identity is understood as dialogically constructed during communicative processes rather than as a set of pre-defined, essentialistic categories. Thus, analytically, it is the interactional space in which communities meet the institutionally framed agenda to learn that needs to be focused on. As Bagga-Gupta succinctly puts it:

Focusing interactional spaces allows for understanding human meetings, dialogues and the very journey of the doing of learning. Accounting for these doings and spaces becomes significant both for what goes on inside and outside institutional arenas like schools, higher education, work places, etc. and for theoretical-methodological implications in the human sciences generally and the Educational Sciences specifically.

(Bagga-Gupta, 2014a: 229)

In the studies that constitute this thesis, ways-of-being and ways-with-words are used as epistemological lenses to frame the interaction in the everyday encounters of individuals dealing with common tasks and a range of semiotic resources in the virtual site of the virtual classroom. A focus on the performativity of learning allows us to shift away from “normative and instrumental ways of conceptualizing meaning making and human identity” (Bagga-Gupta, 2014a: 229). In addition, a performative approach to the study of communication and identity positions is in line with a critical perspective on the use of categories in essentialistic terms. Identity positions, including gender, class and ethnicity, are dialogically constituted. Reaching a deeper understanding of how these identity positions are constituted in online encounters, where access to one another’s body and physical appearance is limited, is of central interest in this thesis, more specifically in studies I, II and III.

This position has also been at the core of the scholarship about CMC over the last two decades. Haythornwaite and Kazmer illustrate the communication without a body in text chat, where words are very important, as: “Communication in a chat room has more heart and a lot less thoughts” (2004: 152). The implication of this argument is that the explicit actions that transpire among participants during online encounters have generally greater implications for how the interactants are likely to interpret certain parts of a conversation (both synchronous and asynchronous, see also Murphy & Collins, 1997; Fägersten, 2008 and White, 2003). This means that there is a need for an analytical focus on what individuals in online communities verbalise and an understanding of how that could influence the other participants and their future actions. For example, it is at times difficult in written conversations to understand irony, politeness or sarcasm precisely because of the lack of bodily and gestural clues that would otherwise have helped in sorting out the type of emotions that frame a certain statement. As boyd interestingly puts it: “digital embodiment requires writing yourself into being” (2007: 145), with regard to the constraints of CMC, specifically when dealing with digital cultures and participation in social media.

In a recent handbook on the pragmatics of computer-mediated communication (Herring et al., 2013), Jenks and Firth (2013) report on a study of synchronous voice-based computer-mediated communication among unacquainted interlocutors. Their analysis illustrates how participants manage turn-taking, identification-recognition strategies and repair using conversational clues that are adjusted according to the affordances and con-

straints of the environment. In the case of voice chat, without visual access to one another, participants in Jenks and Firth's study avoid overlapping talk and design their turn-at-talk by explicitly framing when they have, or have not, completed their contributions. According to Jenks and Firth (2013), the study of how interlocutors choose among different modes (for example written and oral) and how this transition is managed between modes is in need of further scrutiny. Studies I and III aim at contributing towards a similar direction as they specifically deal with the question of how the interactional patterns during the online encounters are affected by access to a variety of semiotic resources afforded in the environment, on the one hand, and the lack of visual access to one another's body on the other²⁸. Access to a multiplicity of media is thus framed in terms of a compensatory resource that sheds light on what it is that is missing that is usually taken for granted in communication, i.e., is invisible, such as the use of gesture, bodily posture, and gaze, in relation to, for instance, turn-taking and addressivity, i.e., who is talking to whom (see also Fägersten et al., 2010).

Communication in written chat rooms (synchronous text chat)

The study of how coherence is maintained in written chat rooms (Murray, 1990, Herring, 1999) and how the use of these media affects language learning has been widely researched within the field of CMC. Tudini (2005) argues that in a virtual space where students are trying to communicate in a language in which they have limited experience, it is possible to define the notion of *collaborative negotiation*, which frames students' interactions and, from my perspective, their activity of languaging in online synchronous environments. This notion refers first of all to the group members' will to communicate and understand each other in the target language. In her study, Tudini analyses text chat interaction in a group of beginner learners of Italian (2005). The findings highlight the participants' attempts to interpret each other's messages, adjusting them so that they become more understandable both in terms of the linguistic form and in the conversational and communicative structures, or combining all these interpretative elements to get to a reasonable understanding of the message. In this sense, Tudini claims that communication occurring

²⁸ A key question of this thesis is also how movement across the communicative affordances and constraints is dealt with by participants in relation to the task at hand in the institutionally framed agenda of the course.

in text chat is a valuable tool that can function as a substitute for oral face-to-face interaction when the students choose to participate in an online course with no physical presence (Tudini, 2005: 13).

Other similar studies (Kelm 1992; Warschauer, 1996; White, 2000; Hanna & De Nooy, 2003; Blake, 2008; Tudini, 2010) frame synchronous written CMC with a didactical purpose in positive terms since writing, rather than oral talk, affords the interlocutors, the language learners, a higher level of accuracy in their contribution and provides the ‘more silent’ participants the opportunity to take the floor and make their written voice²⁹ ‘heard’ in the community.

In line with what the studies outlined above have suggested, McBride and Fägersten (2008) address the issue of participation and social presence from a sociocultural perspective in ways that are relevant for studies I and II. They present an in-depth analysis of interaction occurring among Vietnamese students of English who are taking an online course at a Swedish university. Their aim is to investigate how students negotiate their role using CMC in both teacher-led and student-only seminars.

In line with Tudini (2005), McBride and Fägersten (2008) argue that synchronous text chats have some of the characteristics of face-to-face oral communication (being synchronous and having a turn-taking structure) but at the same time allow the occurrence of special dynamics that are typical for this kind of communication and that depend on a loose and overlapping turn-taking structure. The fact that participation in the discussion occurs on several conversational floors that are present at the same time minimizes inhibition and increases students’ involvement. McBride and Fägersten (2008) offer the concept of *egalitarian participation* when referring to the fact that students in general seem to take greater initiative to communicate in computer-mediated contexts than in face-to-face communication. While, on the one hand, it is important that the students found themselves engaged in collaborative activities in order to create what McBride and Fägersten (2008) call a ‘positive affective climate’, i.e., a sense of community that positively affects motivation, on the other

²⁹ This also refers to the hybridity of SCMC, which is another of its connotative features. Ong (1982) very interestingly discusses the text-based communication facilitated by the advent of digital technology in terms of ‘secondary orality’. Written SCMC evokes early orality because it resembles the communication of the earlier, primary orality of “pre-literate peoples that emphasises associations, repetitions, rhyme, the emotional, the particular and other aspects of narrative as techniques of memory” (Ess, 2011: 16).

hand, these collaborative activities can enhance the sense both of independence and autonomy and of interdependence with other students. In order to achieve that, different kinds of activities, both collaborative and cyclical, are planned in the online course. One example of cyclical activity is the combination of student-only seminars with teacher-led seminars. Drawing from Moore and Kearsley (1996), MacBride and Fägersten (2008) argue that this combination of activities promotes reflection and lessens the transactional distance³⁰.

As far as the students' role in distance learning is concerned, McBride and Fägersten introduce Goffman's concept of 'face', meaning "the image people present or project or believe they project" (MacBride & Fägersten, 2008: 47). In the context of synchronous text chat communication, where a high level of interaction is possible and where the level of inhibition is low, what the students do is to manage 'facework'; i.e., they are engaged in a process that should actively provide them with a face (an identity position) that suits and aligns with the rest of the group.

Furthermore, the synchronous text chat room is a locus where it is possible to achieve egalitarian participation, but it is also true that the volume of text and the resulting richness of the communication can require an extra effort on the part of the students to keep up with the discussion. According to MacBride and Fägersten (2008), synchronous online environments allow the coexistence of several conversational floors simultaneously, where students not only negotiate meaning, but also their position and image in the context.

The findings in MacBride and Fägersten (2008) are relevant for the aim and key issues of this thesis because they highlight some communicative features and strategies that are used by students in a variety of activities and with different group constellations in relation to issues of identification processes in these settings. Studies I and III are attempts to make a further contribution in mapping these strategies and patterns in a similar context where students engage in cyclic activities (from teacher-led to student-only) in the Adobe Connect video-conferencing software. In the next section I turn to some key studies that have focused on communication in synchronous voice chat and video-conferencing.

³⁰ Moore, 1987, see also Chapter 2.

Communication in voice chat rooms and video-conferencing

The analysis of languaging in multimodal learning environments like in a voice chat room or a video-conferencing software like Adobe Connect (where students can both use written chat *and* oral communication)³¹ is challenging in the way it addresses issues of multiliteracies, coherence, affordances and constraints in an environment in which the students have the possibility of using different mediational means during their meetings, an issue that is significant in all four studies included in this thesis.

Taking sociocultural theories as points of departure, Örnberg Berglund (2009) studies the elements of *coherence*, *context* and *affordances* when dealing with the study of multimodal communication. Meetings in Örnberg Berglund's study were recorded using the screen capture program Camtasia. All the features included in the meetings, such as voice, video and text chat, were included in the recordings. Participation rates were calculated in the different modes and the different strategies employed by the students in giving conversational feedback were analysed. Some examples of multimodal conversation were provided, represented in a transcription method with a low degree of detail. The multimodality of the medium is represented using different headings according to the mode, specifying the timing of the contributions (Örnberg Berglund, 2009). The communication in this setting can be considered synchronous, but only one conversational floor is allowed at a time, according to a list where participants wait for their turn in order to gain the floor and get access to the microphone. The focus is on a group of Swedish university students who were taking an English online course.

The results show that different strategies are used by the participants in order to maintain coherence in online settings (Örnberg Berglund, 2009). When dealing with synchronous settings, lexical repetition and substitution, as well as conjunctions or pre-programmed emoticons, are used to try to make sense and maintain coherence in those kinds of environments. Thus, participants engage in what Örnberg Berglund (2009) defines as *multimodal strategies for sense-making*. However, the findings also indicate that the different modes available in the environments do not necessarily promote a more equal proportion of participation among students; the fact that the students' cameras were on during the sessions allowed for participation on different levels. Other factors, such as the type of task as well as the environment itself, influenced communication in the meeting.

³¹ See Chapter 4 for a more thorough description of Adobe Connect.

Örnberg Berglund (2009) concludes that the type of task and assessment, the dynamics of the group as a whole, and the possibility and limitations accorded in the online environment are all central aspects that need to be taken into account when designing an online course, specifically when dealing with language learning and when communication in the target language variety is one of the main aspects and goals of the course itself.

Similarly, a series of studies reported in the edited volume ‘Décrire la conversation en ligne: le face à face distantiel’ [Describe online conversation: the distant face-to-face] (Develotte et al., 2011) offer an interesting overview of the different issues related to language learning and instruction in SCMC. The ten contributors in the volume focused on the same data corpus: a series of 8 dyad conversations between a lecturer in English and four students at the University of Lyon, France. The volume contributors, from different fields (e.g. psychology, sociology, language and communication science), provide a range of perspectives that are in line with the volume’s main objective: to describe and reach a deeper understanding of communication mediated through technology, more specifically, SCMC. One of the contributions that is of particular interest for present purposes is Liddicoat’s analysis of the beginnings and endings of the conversations as well as the moments of interruptions during the conversations. Liddicoat (2011) argues that technology is a constitutive part of the conversations where hybrid modalities compensate for the lack of access to one medium (e.g. the visual). The author further suggests that all the modalities afforded by the technology need to be included in the analysis in order to understand how online conversations unfold through the emergence of hybrid modalities. What Liddicoat (2011) highlights in his study is relevant in order to understand the kind of richness and complexity we are dealing with in the analysis of SCMC in the four studies included in this thesis. Thus these studies also enable a (re)thinking of the concept multimodality in relation to the kinds of activities and online environments the participants in the four studies are dealing with and immersed in.

But does access to a variety of semiotic means in SCMC, and thus to several conversational floors, make communication more ‘democratic’ and accessible for the participants *per se*? And what kind of implications does such access have in the learning process (see question D in the Introduction)? These issues are also focused upon by Hampel and Hauck (2006). In their theoretically framed article about meaning-making in multimodal learning spaces, Hampel and Hauck (2006) argue that “communication in

today's virtual environments is characterized much less by formal writing than by casual chatting, both in written and spoken form" (2006: 5). They introduce the notion of *multimodal meaning making*, where "it is the individuals' needs and interests, with their personal, cognitive, affective and social dimensions that together with task and institutional demands determine the direction of the remaking of the resources available to them" (Hampel & Hauck, 2006: 6). However, Hampel and Hauck underline that new, more creative and democratic representational resources alone cannot improve the learning process, without also promoting "the kind of literacy required to use the new democratic learning spaces to their best effect" (2006: 13) to enable the learners to use the most appropriate tools among those offered in the virtual space and are best suited to the communicative situation they face. Hampel (2006) goes further in this direction in another study where she investigates what tasks are more appropriate for the kind of synchronous online environment that has been used as a communication medium in the study.

Hampel (2006) focuses upon the experiences of a team of task designers and a number of tutors who were asked to use/adapt the tasks in their classes in the online platform Lyceum. Data were collected through qualitative methods: tutorial observations and recordings, as well as tutors' logbooks, questionnaires and interviews with a focus on "student-tutor and student-student interaction, input and output, and feedback, as well as how the multimodal environment was used in practice" (2006: 107). The tasks were communicative and student-centred as well as closely related to the syllabus of the course: "[t]he tasks are designed in such a way that by working together in order to complete the tasks, learners build upon the knowledge they have already acquired both within and outside the course" (Hampel, 2006: 113).

According to Hampel (2006), synchronous online environments, such as Lyceum, allow audio communication and a number of other media, such as text and graphics, which also have the potential of not only replicating what we can do in face-to face communication, but also have the potential of opening up for a more democratic way of interacting with each other; this is due to the multiplicity of modes that allows several conversational floors to co-exist in the same communication situation (Hampel, 2006). It is further argued that this can have very important implications for how the tasks for the course are designed, since the multimodality of the medium has a significant impact on interaction and communication (2006). As far as communication tools are concerned, findings show

that the use of these tools in the online environment varied according to the level of familiarity with the medium. The tutors had been working with Lyceum for at least one year. They were found to be using the tools somewhat more than the students. The latter generally preferred to use the speaking mode, as they found the text and graphics rather distracting. Issues regarding turn-taking and the silence of the environment were raised by the tutors. The lack of bodily representations means that it could be difficult to interpret silence in this environment, and this was often taken as a sign of inattention (see also Study III in this thesis for an analytical discussion on silence in SCMC). This implies that communication could be rather slow and that tutors needed to be more flexible in the implementation of the tasks since they did not manage to cover everything planned, due to, for example, technical problems, or because the communication was slower than expected. Study III investigates similar issues from another perspective: looking at the situated interaction where students were focused on a task. What became clearer, in the process of working on and compiling Study III, is that in order to study communication in these settings (like Lyceum or Adobe Connect) it is important to generate data that go beyond the boundary of the screen; what participants prefer to do or are compelled to do is strictly related to their 'offline' world to which we, as analysts, have limited access to, if we have it at all.

Another relevant study to take into account for the purposes of this thesis, in terms of the analysis of how semiotic resources are used for different purposes, is Wang (2006) who investigates the negotiation of meaning in a group of beginner learners of Chinese in a context of video-conferencing. A turn-by-turn analysis of five one-on-one (teacher/student) video-conferencing sessions (using NetMeeting) is focused upon in Wang's study. Drawing on Varonis and Gass's model for negotiation of meaning, Wang illustrates how interactional modification (caused, for example, by the search for a particular vocabulary item by one of the participants) consists of different parts and modifies the interaction at different levels: the indicator, where one of the participants inquires about a word, is generally followed by a response and a reaction to a response. In Varonis and Gass's model, interactional modification implies a momentary vertical shift in the conversation, during which the interlocutors achieve a resolution of non-understanding: "when a resolution is reached, a negotiation routine is considered completed and the conversation resumes its horizontal movement" (Wang, 2006: 126). Wang highlights how these breakdowns in conversation mediated by a video-conferencing program may

have a different level of complexity since the participants can use different modalities to communicate the fact that one of the participants did not hear/understand a word or sentence uttered by the interlocutor. The indicators that have been identified during the video-conferencing one-on-one meetings can either be uttered as explicit statements of non-understandings (using voice) or through visual indicators (using facial expressions). The whiteboard was widely used during the meetings to achieve a resolution. Here particular word items that triggered the indicators of non-understanding in the conversation were written/displayed. Another function, document sharing, was also used as a reaction, usually to share larger and more organized information.

Wang (2006) clearly acknowledges the advantages of the one-on-one format when meeting in a video-conferencing environment. Participants can easily see one another's facial expressions made available by the web cam and the learner is 'forced' to react to the teacher's response to the indicator, concluding that "the exchanges between the two parties were much more intensive than in a multi-way interaction" (2006: 138). Even though Wang's study is an important contribution to the empirical analysis of the situated interaction in multimodal online environments, further research is needed before claiming that the features included in the online video-conferencing system enable the creation of "an effective language learning environment, conducive to task completion" (2006: 138). I argue that these conclusions are often made on the basis of the assumption that the virtual site of the video-conferencing program bears particular characteristics that *per se* can facilitate learning. In Study III we show how space and time dimensions work in concert with group constellations and the task at hand in ways that are only partially (although very importantly in different ways) related to the participants being in a context of video-conferencing. This leads to a focus on methodological challenges in the analysis of SCMC. In the following I survey some empirical studies that approach this issue.

Challenges in the study of multimodal synchronous computer-mediated communication

The perspective that Lamy and Flewitt (2011) use in their analysis of SCMC offers insights from a multimodal approach in the study of online oral conversation. The authors argue that research in language learning and technology has been widely interested in effectiveness and the search for best practices to which to align the set of learning outcomes, task de-

sign, group dynamics and literacy (Lamy & Flewitt, 2011). This body of research is relevant to their objectives in relation to how such studies engage with issues of language learning in the particular environments that Lamy and Flewitt investigate, even though their focus does not primarily lie in evaluating these results as discrete factors of measurable communicative success (a position that I share in this thesis). What Lamy and Flewitt contribute to is an understanding of the online space(s) of the conversation as a multimodal setting in which issues of representation and analysis are at stake. In particular, the selection of the extracts analysed at the micro-level reveal their interests in relation to the aim of this thesis; namely in examining how the space(s) of interaction in an online exchange is fractured in a way that influences the situated interaction between participants, especially when one of them does not have equal access to the other's communicative space dimension. In one case, a third party enters the conversation, a friend of one the participants' in the dyad, and starts sending instant messages, but the other participant can only hear the auditory signals that are produced by the technology every time the message is sent. Thus he notices that his interlocutor is engaged in another, parallel conversation, but that his access to it is limited. The analytical challenge for the authors – i.e. the researchers – has been to map such a conversation in which a range of modalities are used to make sense of what is going in the semiotic space(s) of the fellow participant. The authors perform a semiotic analysis drawing from the concept of geosemiotics (Scollon & Scollon, 2003) that focuses on the interplay of three different orders where discourses get played out: the interactional, the visual and place orders. What is of particular interest is that the analysis of the data (of both the interactional corpus and the follow up interviews with the participants) by Lamy and Flewitt (2011) highlights how these three orders are all interdependent in the interaction, both chronologically (i.e., in the sequentiality of the meaning making) and semiotically (i.e., in how the meaning that is negotiated is oriented towards by participants). An indication of future analytical challenges and possibilities in the study of online synchronous interaction is framed by the authors in terms of the synergy of the three epistemological positions offered by conversation analysis, social semiotics and geosemiotics.

In a more recent study, Lamy (2012) makes an interesting attempt to deploy these three perspectives by offering a re-framing of the analytical tools of CA into multimodal SCMC in online learning (Lamy, 2012). This study (Lamy, 2012) presents the analysis of three multimodal conversa-

tions in the video-conferencing platform Lyceum among students at the master's level in the *Copéas* project, a partnership between the University of Franche-Comté and the UK Open University. The students, all located in the geopolitical spaces of France, were divided in two groups of eight. Each group was supervised by an instructor, connecting from the UK as part of the Master Program in Open and Distant Teaching (ODT). The students in one of the two groups were rated as 'false beginners' in a pre-test and had thus a limited experience with the target language variety, in this case English. The groups were managed in sub-groups of three or four students. The analysis of micro-extracts from the last session in the data set is represented through screenshots and tables in which the sequentiality *and* the synchronicity of the tools used (e.g. chat, audio, documents) are illustrated to provide "an understanding of the phenomena across modalities" (Lamy, 2012: 8). Lamy refers to a literature review published in the handbook about *Online Communication in Language Learning and Teaching* (Lamy & Hampel, 2007), where the authors identify papers written between 1995 and 2005 in which the methodology used in the analysis is specifically outlined. They highlight that only a couple of studies have a declared commitment to making use of CA, and none of them include a visual or multimodal analysis of the interaction. Lamy (2012) sees this as problematic since it entails a confinement of the field in the study of the linguistic parts of the conversations, which is probably due to the fact that "some of the work that has attempted to marry CA methodology with online analysis has historically been confined to synchronous written text environments" (Lamy, 2012: 4). In fact, Lamy argues that learning environments such as Lyceum and Elluminate (or Adobe Connect) afford a range of 'meaning-making devices' which are used by participants in different combinations and with different purposes, thus creating an "interlocking of semiotic system and effect [that] can become extremely complex" (Lamy, 2012: 5). Furthermore, the author advocates the study of "the participants' conventional use of the tool as well as any 'workarounds' that they may adopt" (Lamy, 2012: 5).

Lamy (2012) examines how geosemiotics (Scollon & Scollon, 2003) and social semiotics (see for example Jewitt & Kress, 2003; Jewitt, 2003) could be used as analytical and epistemological lenses to understand the impact of the design of a platform on the communication (and ultimately on learning and instruction) in the environment. Lamy (2012) concludes that in order to carry out this kind of analysis and the data creation that enables such analysis, further work is needed that goes beyond methodo-

logical principles. This, Lamy suggests, will enable the testing of the synergic use of CA, social semiotics and geosemiotics in the analysis of learners' interaction in different settings, both inside and outside institutional frames.

A much needed critical approach is presented by Sauro (2009) who makes an interesting attempt to understand how the choices and usage of different modes play an important role in the situated interaction and participant subject positioning (a similar interest as outlined in issues C and D in this thesis) by drawing upon *cyberdiscursivity*, a concept coined by Jacobsen (2002) "to differentiate the discourse of CMC from traditional forms of orality and literacy". (Sauro, 2009: 104). Cyberdiscursivity sets forth four different elements: virtuality (the discourse is similar to the real world, but without its limitations), dynamism (cyberdiscursive texts lack fixed, final forms and are therefore easily moulded and changed), emergence (structure is preceded, rather than followed, by textual production in a cyberdiscursive environment), and idiosyncrasy (the blurred line between reader and text).

Sauro refers to synchronous text chat as an example to explain the virtuality and emergence of cyberdiscursivity, since chat allows the existence of several conversational floors simultaneously. The participants have the possibility to scroll the text back and forth in order to recall missed threads and "to maintain overlapping conversation with multiple partners" (2009: 105). Using a discourse analytical approach, Sauro explores the bimodal (audio and text chat) 20-minute long computer-mediated exchange between two 'non-native speakers of English', in *Yahoo! Messenger*'s synchronous voice-chat tool. In my view, the author has managed to address the issue of representing the simultaneity of the different modalities used in the interaction and how the participants "negotiate interactional asymmetries that may have otherwise limited their opportunities to use the L2" (2009: 113). To capture both spoken and written interaction, a video camera was positioned in the room one meter behind one of the participants to record the computer screen as well as the participants themselves. The researcher was also present in the room with the aim of operating the camera and taking notes. The excerpts from the video recordings are represented through tables with two columns for the spoken and written modes, and a third column, called *Other*, used to represent all other sounds or interruptions in the interaction. The results show how the positions of the participants' shifts in accordance to the modality used, from a more receptive to a more productive position. Sauro's (2009) work

is an important contribution in methodological terms as well: following participants across sites is a challenge in netnographic research, and it could be difficult at times to define the boundaries of the research field when dealing with multi-sited research, as is often the case when studying online communities³².

Indeed, the virtual classroom focused upon in the four studies included in this thesis is a complex site on which to focus the analytical gaze precisely because the analyst has a partially curtailed access to it. However, the analysis carried out in Study I and the insights that derived from it point to a direction that was not expected at the beginning of the analytical journey being outlined here. Participants' lives, particularly in relation to the embodiment of their local and physical position while they were participating in the online encounter of the course meeting, were an integral part of the in-situ interaction inside the virtual classroom. We saw a constant shift in focus from the location of their physical surroundings to the global aspect of the virtual classroom where participants could, in fact, congregate from anywhere with an internet connection. And indeed, some of the participants inside the virtual classroom were, in fact, sitting at their desk in locations that lay outside of the geopolitical spaces of Sweden. As their physical location was something that got topicalized in talk and oriented towards by the participants, we decided to study this phenomenon more deeply in Study II, thus taking the concepts globalization and glocalization to support the analysis.

Summary

This chapter began with a presentation of the overarching theoretical framework of Part 1 of this thesis and the four studies presented in Part 2. A sociocultural perspective on the study of languaging in virtual learning sites means that social interaction is in focus in the analysis and is understood as the locus at which learning occurs and can thus be fruitfully investigated. A sociocultural take on human communication also entails an understanding of the human mind as inherently social. This means that this thesis is interested in answering questions that deal with how the use of a range of mediational tools, or semiotic resources, affects participants' identity positionings when dealing with the institutionally framed agenda

³² See also Bagga-Gupta (2012a), Bagga-Gupta, Messina Dahlberg and Gynne (2014) for similar deliberations on the topic of netnographic research as well as Chapter 4 in this thesis.

of the online Italian courses focused upon in the four studies included in the thesis.

In addition, this thesis aims at mapping the communicative strategies and interactional patterns in the kinds of synchronous computer-mediated communication in which participants have limited visual access to one another. The epistemological positions of conversation analysis and ethnomethodology guide us in the micro-analysis of the interaction. This is also an aspect that I deal with in further detail in Chapter 4 of this thesis. The approaches of multimodality, multiliteracies, chaining and translanguaging have been focused upon in studies I and II to analytically describe how participants make use of the semiotic resources they have at hand to make meaning and negotiate their identity positions inside (and across, see Study II) the virtual classroom. In Study III literacy practices across sites became the focus of the analysis. This also meant a move towards a conceptualisation of literacy practices (as in the New Literacies field) which encompasses the use of semiotic resources in terms of access to a continuum, rather than a multitude of language varieties and modalities. In this chapter I discuss how prefixes like multi- and trans- (like in multilingualism and translanguaging) have pedagogical, rather than analytical interests.

A focus on the learning opportunities afforded in the kind of online environments like the one focused upon in the four studies in this thesis was guided by the theoretical perspective of social learning. I find this concept interesting and fruitful when attempting to understand how online synchronous meetings are structured in a course in order to allow participants to access people, rather than content. This is a crucial step in the theorisation of online dialogue which builds upon a descriptive analysis of everyday interaction rather than on prescriptive considerations on what ‘good’ dialogue should be.

The study of identity in the making (studies I & II), rather than a fixed range of categories, was anchored in a dialogical performativity approach to the study of social interaction. Identity is co-constructed in the moment-by-moment interaction through processes of participation and reification. The theoretical construct of *community of practice* was used in studies I and II, but the analyses in these first studies highlighted how this concept was not sufficient for attending to the multi-faceted and multi-sited nature of the glocal communities (Study II) we were studying. The moment, or order, of interaction was thus focused upon in Study III, in which we also attempt to analyse the co-construction of time and space in virtual sites.

These two dimensions are foregrounded because they are crucial to understanding patterns across different scales, from the micro-scale of analysis (a few turns-at-talk) to the macro (a series of encounters over time).

Some relevant approaches to the study of embodiment and communication in CMC have been presented in this chapter. I have outlined how in the study of CMC, and more specifically of SCMC, using video-conferencing software like Adobe Connect which allows both oral and written communication, it is crucial to find analytical apertures that permit an understanding of how meaning is negotiated across language varieties and modalities both simultaneously and parallel to one another. To conclude, the theories and concepts that have been briefly presented in this chapter all point towards an understanding of communication and language as something that is done in interaction. The thesis builds upon sociocultural and dialogical perspectives on the mind, and its primary interest lies in the analysis of languaging as a mode of communication, rather than as a goal in itself. This tension between language use and language learning (or language as tool and language as goal) is, however, an issue that the students face constantly and which is analytically foregrounded in further details in the next chapter.

4. Entering the field of virtual learning sites

In this chapter, I describe and explain the main methodological choices made during the creation of the empirical data in the four studies included in this thesis. The main focus of the thesis, as well as its main object of inquiry, is framed by the online institutional environment in general and the virtual classroom in particular. In this online environment, the students could meet synchronously within the frame of an “Italian for Beginners” online language course provided by a higher educational institution in Sweden. I describe some of the methodological stances in the different studies, in relation to the representational and analytical work of the data set that has been generated in the thesis.

Besides the issues concerning the process of capturing and analysing the activities in the field, another important question is: *where* is the field? When studying CMC, the computer/smartphone/tablet is the mediating tool that enables people to communicate from different locations, sharing a software application. Considering an online course, the field would be the totality of the virtual environments that constitute that course. An advantage of this kind of field is that all video-audio-text communication in the environment (covering a large part of the continuum asynchronous-synchronous) can be recorded and saved in a digital format. Making recordings of online seminars in a video-conferencing software is also a rather uncomplicated matter, since there is no need for cameras, cables, tape-recorders or difficult choices regarding where to direct the lens, etc. Everything that occurs on the screen can be easily captured and saved. The position of the researcher as an ethnographer can also be rather anonymous. It is possible to ‘be there’ as an insider sharing exactly the same virtual environment as the participants, remaining a rather unobtrusive presence³³.

Androutsopoulos (2008) makes a strong case when he defines his work in terms of “adopting an ethnographic perspective” (2008: 15) or under-

³³ During my fieldwork in Italian I and Italian III (see Figure 6, Tables 1 & 2 in this chapter) I was present during the first part of the seminar on several occasions, to further introduce myself and the project (a letter of informed consent had been previously sent to all participants via e-mail) and to explain that the seminars were going to be recorded using an application embedded in the Adobe Connect software. I attended the first minutes of every seminar during Italian III to start the recording. This, however, was not necessary in the Italian I group in which the teacher assisted me with this task and started the recording herself.

standing ethnography “as a method, not an epistemology” (2008: 2). I find it interesting and indeed thought-provoking that in today’s digitalised and highly globalised world, there is such a need (of which Androutsopoulos’ article is only an example of) to motivate (almost excuse?) the use of (net)ethnography even when researchers do not spend several years ‘in the field’. Furthermore, the use of digital technology allows us to create a corpus of data that was not possible in a pre-digital age where observations were recorded only by means of paper and pencil, or using a tape recorder at best. In addition, methods of sharing knowledge in academia today are organised in such a way (through the production of relatively short academic journal articles) that makes the writing mode of ethnography rather problematic, since it entails the need for a space for accounting that is hard to compress into the very limited word counts in scientific journals. In other words, there is an increasing tension between what is known about society and its ‘holistic’ representation. As Marcus puts it: “what is holistic representation? What is holism once the line between the local worlds of subjects and the global world of systems become radically blurred?” (Marcus, 1986: 171). Moreover, representing participants’ online interactional space in the data sets of the four studies included in this thesis has been challenging in relation to the type of virtual learning sites where students and teachers gathered from as many physical spaces as the participants in the encounter. The fractured ecology of the online space of the virtual classroom (Messina Dahlberg & Bagga Gupta, 2015) challenges the position of the ethnographer as the ‘knowing observer’ (Clifford & Marcus, 1986). In fact “[a] conceptual shift, ‘tectonic’ in its implications, has taken place. We ground things, now, on a moving earth. There is no longer any place of overview” (Clifford & Marcus, 1986: 22). This is relevant for the kind of complex cultural description that has been carried out in the four studies included in this thesis.

As Hine puts it, in order to make sense and explore the ‘texture of social life’ there should not be expectations that there will be “clear patterns or boundaries” (Hine, 2009: 5). The same issue can be raised when dealing with the assumption that the ethnographer should be “immersed” in the field of study, or “the physical presence in the midst of people being studied” (Hammersley, 2006: 8). Can we understand the situated activity when we have access only to the online practices people are engaged in? Hammersley (2006) argues that we can, since online interaction follows the conventions, norms and rules that apply to most communication, (technology-mediated or face-to-face), participants need to display enough

about themselves to be able to achieve intersubjectivity in the online space. This is very important also in relation to the bias of technology as something ‘new’ or ‘different’ and therefore exotic (Leander & McKim, 2003), ‘as opposed to’ the norm of face-to-face interaction and “physical ethnography”: “[a]s ethnographers, what interests us about virtual worlds is not what is extraordinary about them, but what is ordinary” (Boellstorff et al., 2012: 1)³⁴.

In addition, I would also like to touch upon some of the issues that have arisen in relation to how the boundaries of the field in terms of online/offline and on-screen/off-screen activities are framed. I argue that such boundaries are becoming diffuse, in favour of more fluid and complex activities that should be considered, in their hybridity, in terms of a continuum where the blurriness of the boundaries has a bearing on situated social interactions (see also Takahashi, 2010; boyd, 2008 and Bagga-Gupta, 2013).

Maintaining the immigrant’s attitude: the professional stranger

We have met the other and they are us.

(Agar, 1996: 20)

In the first chapter of *The Professional Stranger*, Agar illustrates very vividly the fine line between the researcher/ethnographer, and the other, the object of research. He claims that this fine line has become less and less clear, to the point that such a distinction does not make sense any more: “[e]thnographers and others swim in the same interconnected global soup” (Agar, 1996: 21). Agar highlights the rise of (and need for) more complex issues; questions about what is going on, and also how and why, are laid on the table (Agar, 1996: 37). This is also highlighted by Gobo, who accounts for the inappropriateness of considering the researcher in terms of ‘stranger’ “given that the ethnographer is in many respects a member of the society he or she is studying” (Gobo, 2008: 10). Such ten-

³⁴ Jackson illustrates the tension between the ordinary and the extraordinary (which is commonly understood as more worthy of analytical attention in the study of institutions and more specifically in classroom research) in terms of how the practice of ‘just looking around’ legitimises the ethnographic process of looking at the data “to achieve a *renewed* understanding of the taken for granted” (Jackson, 1990: xviii, my emphasis). This methodological position is also what guided our analytical work, when looking at the online synchronous meetings in the data set included in the four studies.

sions and contradictions have been present in the CINLE project since its initiation, and in the four studies that are included in this thesis, from the planning phase and throughout the data collection (in particular the added dimension of data-creation from student participant's local environments), and they remained part of a reflexive process during the writing of Part 1 of this thesis.

Outlining the importance of being an 'outsider' as a person open to the unexpected refers to the need from a qualitative research perspective to determine the unbiased vision the researcher is expected to have (from a positivist perspective) in relation to his/her research objects. Denzin and Lincoln refer to this as the 'gold standard' of educational research, where evidence-based methods were seen as the 'good way' of conducting research (2000: 1). However, such a distance of the researcher from his/her objects is also in line with the historical and theoretical backgrounds of anthropology and ethnography as colonial endeavours. According to Denzin and Lincoln, the methods used in ethnography create a window into the world through the use of a range of practices and representations which themselves change this world (2000: 3). Thus, looking at research objects is always looking at the Other through the epistemological lenses that derive from the use of language, gender, social class and ethnicity³⁵ (Denzin & Lincoln, 2000: 11). In this sense, and very interestingly, Denzin and Lincoln talk about the researcher as a *multicultural subject*, because "we no longer have the option of deferring the decolonization project" (2000: 11). This means, I argue, that researchers need to acknowledge the complexity of their background experiences as well as the vantage points they keep as the person entitled to analyse and provide understanding of the processes in focus³⁶. This is done in this project by (i) acknowledging my position as a former teacher in the course in focus as well as a colleague of the faculty members who opened the field for me, as well as (ii) undertaking joint analysis and co-authoring three of the studies with a

³⁵ As well as the very techniques and methods used in research.

³⁶ See also the edited volume by Byrd Clark and Dervin (2014) on the theme *Reflexivity in Language and Intercultural Education*, for much-needed contributions on reflexivity in research. Of particular interest is the notion of 'hyper-reflexivity', which they describe as stemming from "the social turn" in applied linguistics and intercultural education [...] whereby researchers started to look more closely at the identities of their participants including themselves and their investments in research" (Byrd Clark & Dervin, 2014: 24).

senior scholar who was neither a teacher in the course in focus or a colleague in the course.

Pink, drawing from Okely (1996), refers to the concept of *retrospective fieldwork*, i.e., how the researcher's personal experiences (in my case, my years as a teacher in online language courses at the same institution where fieldwork was conducted) are used in the creation of ethnographic knowledge which may, later on, "become part of a piece of professional work" (Pink, 2007: 34). In this case, retrospective fieldwork is a mixture of the researcher's own experience as a former professional in the field, but also, and very importantly, it refers to the possibility allowed by the digital format of the recordings of the virtual classroom to go back to the field, to observe the phenomena from, closely enough, the same point of view as if I were there, in the specific moment in time when the actions unfolded. My going back to the recordings is also, in this sense, a re-enactment of the educational sessions, from the perspective of the other participants in the encounter. In the next section, I provide a brief overview of the research issues and epistemological starting points of the thesis.

Project issues, epistemology and their connection to methodology

This thesis and the four studies that constitute it have emerged from an attempt to investigate and reach a deeper understanding of the communication that occurs in virtual institutional settings in higher education, more specifically in the moment-by-moment interaction in SCMC. The research questions and the choice of focus took form from my own interests and passion for the study of online synchronous meetings where people attempt to engage in some kind of institutionalized learning activity. I have been provided access to the field from the gatekeepers (the teachers and the head of the department) as a former colleague. Hence, the nature of the selection of the group to study and the kind of activity to focus on was two-fold: on the one hand, I approached and asked the colleagues I knew they would be willing to give me access to their classes and to give me the opportunity to introduce the project to the students in their courses, and, on the other hand, I had an interest in the synchronous meetings and the exploration of *naturally occurring interaction* in those settings. The issue may raise the question of whether the institutionally framed context in which the interaction transpires in this online language course can be described as *naturally occurring*. In fact, in CA two strands of

analysis have developed, the one concerned with the social institution *of* interaction and the other as the management of social institutions *in* interaction (Peräkylä, 2011). The latter is interested in the study of social interaction among professionals and their clients, or among students and their instructors. However, the definition of *naturally occurring* can apply to both cases, since what the term refers to is the methodology employed in the data creation, where the data “derive from situations which exist independently of the researcher’s intervention” (Silverman, 2013: 274). In addition, defining what institutional talk is and when it occurs can be an intricate matter, since the institutional context (e.g., a classroom) and the institutional talk performed in it may or may not, in fact, overlap. As Drew and Heritage succinctly put it, “the institutionality of an interaction is not determined by its setting. Rather, interaction is institutional insofar as participants’ institutional or professional identities are somehow made relevant to the work activities in which they are engaged” (1992: 3-4). One of the goals of this thesis is to understand precisely this tension between the social institution *of* interaction versus *in* interaction in the virtual classroom through the use of analytical methods that account for the sequentiality and materiality of talk, modalities and literacy practices in and through the online spaces of the situated encounter. This thesis shows that evidence of this phenomenon can be provided at the analytical level through the mapping of participants’ *orientation towards* the different activities and how these *are topicalized* in talk (see studies I, II & III). Seedhouse’s position in this debate is very clear: “[t]he concept of interaction in the classroom being not genuine or natural and that outside the classroom being genuine and natural is a purely pedagogical one” (Seedhouse, 2004: 69).

Hammersley (2006: 6) raises the issue of whether to concentrate on the bigger picture and a holistic ethnography (see also Clifford & Marcus, 1986) or on micro-level interaction (i.e., the in-depth analysis of what transpires during particular occasions). When dealing with internet-based research, defining the boundary of what is micro or macro, what is online or offline, is a difficult issue to solve. Sometimes it is even impossible to know whether the participants in the encounter are physically “there”, in front of the screen that gives them access to the virtual classroom, since very often the students and the teachers do not have the web cam-option on during the meetings, or if they do, it is only for a brief moment at the beginning of the meeting.

The ontological and epistemological starting points (or worldviews as defined by Creswell [20099] in this thesis are briefly accounted for here. This thesis:

- is an account of what people do rather than what they say they do (a performative take on communication and identity);
- understands learning as the activity of people engaged in meaningful tasks, in relation to the social and/or institutional agenda of the educational activity in which they take part;
- focuses, in its analyses, on language use, or languaging, rather than language as a system;
- frames communication and identity in non-essentialistic terms, favouring a critical position in which the movements across language varieties and modalities are accounted for and understood through the study of everyday interaction of participants.

In the following sub-sections, I frame the object(s) of inquiry and account for issues of selection, validity and generalizability.

Considering the boundaries of the object of inquiry in project CINLE

As a language teacher of Italian, during the last ten years³⁷, I have experienced working in different kinds of online environments (learning management systems [LMS], video-conferencing programs, virtual 3D environments, text chat, e-mail) in online language courses, at different levels, offered by a Swedish university. Back in 2004, we had our first synchronous meetings in an environment called Digital Space Traveler³⁸ where participants had an avatar at their disposal, and a “patio in the woods”(a 3D environment) was the virtual environment where we had our meetings. From those first meetings to the video-conferencing programmes that are used today, the synchronous meetings are the spaces where students can engage in situated activity systems.

³⁷ I was not the teacher in the courses in focus in the thesis four studies, although I have been involved in teaching other courses in the Italian department during the same time period, 2010-2012.

³⁸ Original spelling.



Figure 2: Digital Space Traveler: The first 3D digital environment used in the Italian department at a Swedish university for synchronous meetings (2001-2006).

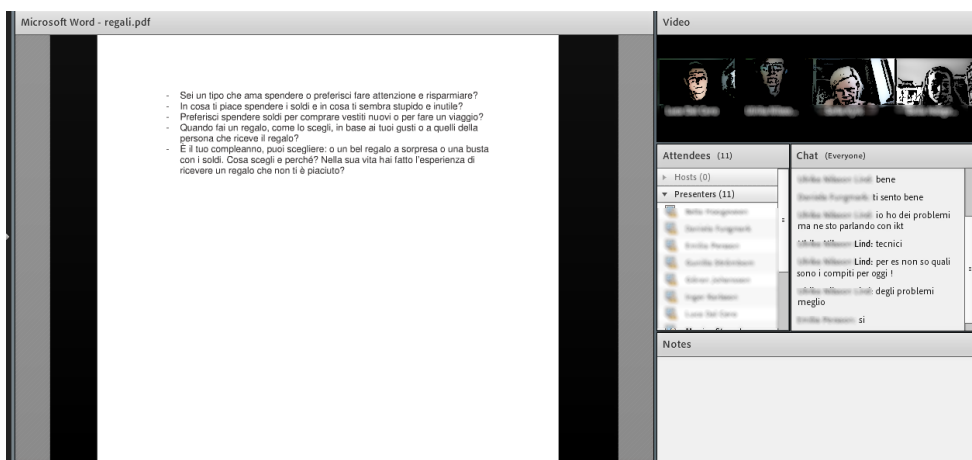


Figure 3: Adobe Connect: The video-conferencing environment used by all language departments at a Swedish university from 2007 on. This picture is from an Italian class in 2011.

Figures 2 and 3 illustrate two kinds of digital technologies that allow synchronous communication and use different semiotic resources (using

Kress' terminology³⁹) in the form of verbal communication and gestures, as well as other symbols (such as emoticons). Adobe Connect is the video-conferencing software used during the course meetings that have been in focus in the project and can be considered the object of inquiry in the different studies. Compared to the environment in Traveler, where participants could move around and meet in a virtual-reality 3D setting that can be compared to similar environments like Second Life, video-conferencing platforms like Adobe Connect have a very different design, and, therefore, different affordances and expectations for the user (Örnberg Berglund, 2006). Adobe Connect is an online environment composed of different 'sub-spaces' or 'pods' that, like windows, open up different communicative landscapes and affordances. Such pods are displayed in a strategic manner in the desktop application. The biggest pod, on the left-hand half of the screen, is the interactive white board (WB), where, in addition to writing on it, participants can upload and share files with the whole class. The other half of the screen contains a number of smaller pods, one with the list of the participants in the meeting and another where the web-cam images are displayed, if participants choose to put their cameras on. The camera pod is always present and stays in a grey tone if no web-cam images are available. In the same area, participants can use the written chat pod to exchange written instant messages with one another. During this process, the program also displays who is typing, before the actual message is sent and made publically available. This piece of information can be seen as a mode in itself, thus conveying meaning for the participants, and has been included in the analysis and transcription in Study II. The pod in the right-bottom corner is the note pod. Similar to the chat pod and the WB, this pod allows the user to see in real time what the writer is producing in the written mode. At times the teacher uses this as an alternative to the chat pod. The students and teacher have to log in to the platform to enter the classroom. Each user has a set of privileges or rights which determines in what ways they can participate in and alter the environment. Teachers usually have 'higher rights' than students and can perform different tasks in the environment, such as changing the platform layout (and the disposition of the pods), removing pods, and creating break-out rooms. This level is called 'host', while students are logged in as 'participants' with the right to use the microphone and to move (and remove) pods. The problematic aspect of this rather 'democratic' division of labour

³⁹ See Kress (2010).

among students and teachers is that all movements and changes in the platform are always visible for the whole group. If someone by mistake changes the position of a pod or removes it altogether, the whole layout gets modified for everyone. This can create some confusion at the beginning of a course when students ‘click around’ and try to understand how the environment works without being aware of the fact that their actions have repercussions for all other participants. This has been an issue at the university since Adobe Connect was introduced in 2006, with the subsequent production of a range of documents and video tutorials to inform new students on how to handle their first meetings in Connect.

After this brief presentation of the field, in terms of the spaces of the classroom where students and teachers gather for their weekly meetings, I explain how the two courses included in the data are organised in terms of number of meetings and participants in the next section (see also Table 1 and 2 for an overview of the data sets that have been used in the four studies).

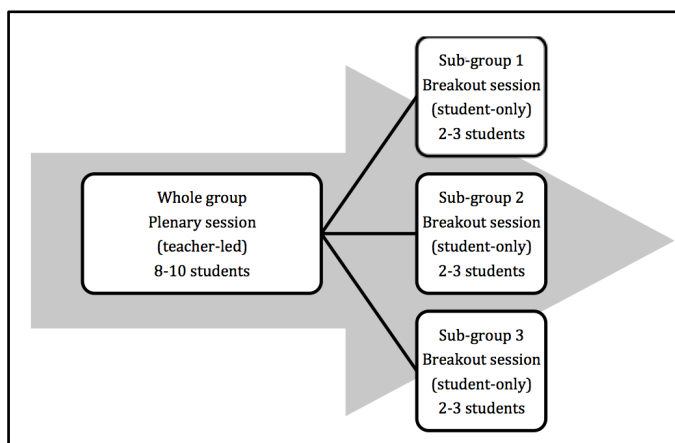
Overarching presentation of the data

The empirical material included in the four studies that constitute this thesis is comprised of the weekly synchronous meetings of two courses offered by a Swedish university: Italian for Beginners I, (henceforth Ita I) and Italian for Beginners III (henceforth Ita III). Each course ranged over one semester of study (approximately 15 weeks) during which 10-12 meetings were scheduled.

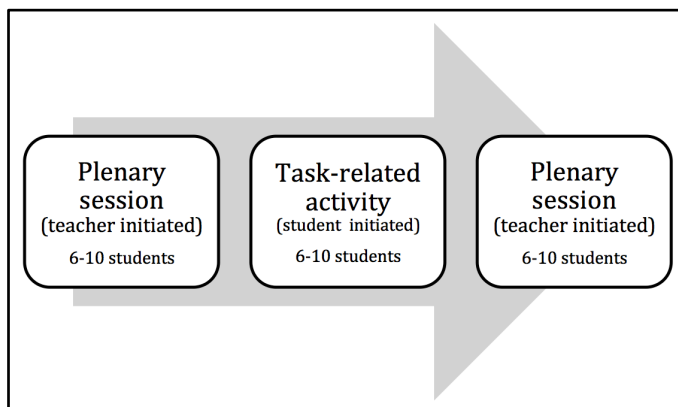
Ita I and Ita III have a similar syllabus, although with different specific learning goals based upon the different levels of the courses. Both courses aim at developing the written and oral skills and cultural awareness of the students in relation to the target language variety Italian. The students were expected to individually access (by purchasing or borrowing via the library) the course literature and, in addition, they were provided with a set of materials specifically selected and/or designed by the course instructor in preparation for each meeting. Home assignments were also scheduled to be handed in to the teacher each week. The course was supported by the Fronter LMS, where most of the interaction beyond the Adobe Connect classroom occurred between teachers and students. However, e-mail and telephone were also important communication media used during the duration of the course.

The decision to focus on classroom interaction was guided by the interests in project CINLE: in understanding one of the pillars that sustain

online education in general and online language education in particular; i.e., synchronous meetings, when students can actively use the language variety they are interested in learning, using the oral mode of communication with other fellow students and the teacher. As I discuss in the introduction of Part 1 of this thesis, the dialogue that is made possible during the synchronous meetings is what, in fact, makes these encounters worth all the efforts that their planning and participation require. However, the centrality of the material used before, during, and after the meetings was also acknowledged in the analysis in all four studies. Furthermore, this was also guided by the issues that are at stake in the project, more specifically issues A and B regarding students' communicative strategies related to the institutional learning activities (question A) and the interactional patterns that arise during these activities (question B). Ita I and III also had two different teachers and this had a repercussion on how the meetings were organised in time and space (cfr. studies I & III).



a)



b)

Figure 4: Organisation of space and time during a) one Ita I session and b) during one Ita III session.

Figure 4 exemplifies the organisation of space and time in one session of the Ita I (above) and Ita III (below). During Ita I the teacher is present and leads the first 40-60 minutes of the plenary session. The teacher subsequently lets the students leave the ‘main classroom’ to enter other online rooms where the sub-groups of two or three students are required to engage with the task-related activity according to the weekly plan of the course. During Ita III the teacher is present for the whole 60-minute session but the lesson is organised in smaller sessions according to the task at hand. The organisation of space and time is an important feature of classroom interaction (see also Sahlström, 1999; Bagga-Gupta 2002), and in the virtual classroom it shapes how communication unfolds among participants, who is likely to take the floor, and, in turn, the kind of communicative patterns that shape the interaction (see studies I, III & IV in particular for a further methodological discussion of this issue).

Zooming out from the organization of one online lesson, Figure 5 illustrates the organisation of the online language course over one academic semester. The students had access to course materials and the weekly planning in Fronter and were expected to prepare and study the materials ahead of the synchronous sessions as well as to attend to home assignments after the lesson (HA in Figure 5).

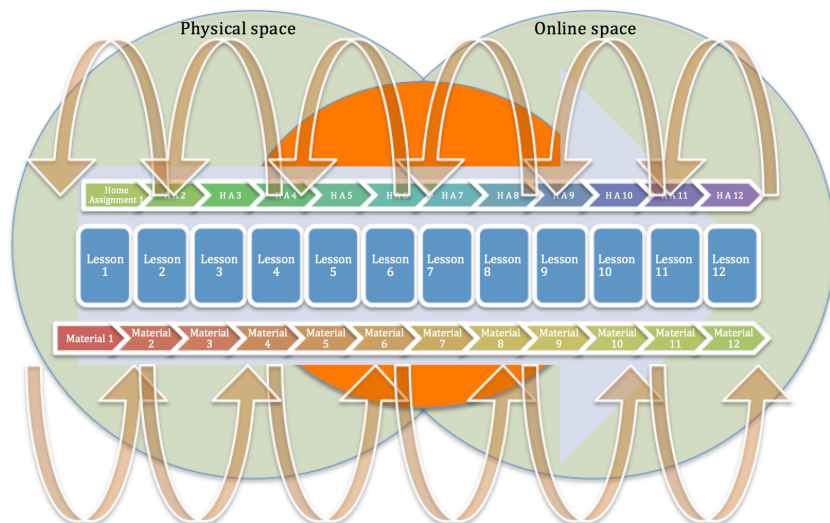


Figure 5: Cyclic pattern of the online language course during one academic semester. The central orange space, at the boundaries of physical and online spaces, represents the virtual classroom (Messina Dahlberg & Bagga-Gupta, 2015).

The course organization is framed in terms of a cyclic pattern in relation to the texts and discourses that are used as a point of reference for what happens both *before* and *after* the synchronous sessions. Thus, the lessons inside the virtual classroom, an environment at the boundaries of physical and online spaces, constitute the TimeSpace frame in which what happened before and what will happen next are negotiated and topicalized in oral and written communication by the participants.

Entering the field, going out and then getting back again: the case of retrospective fieldwork

As a teacher in Italian in online courses myself, I found it very difficult to 'see' the data as an outsider, shifting my perspective from a participant's position to a distanced scholarly viewing attempting to move from a participant's to an etic way of seeing. The issue in the analysis of mundane interaction is to go beyond description, towards analysis and interpretation, as Agar suggests, drawing on Wolcott (Agar, 1996: 50). The process of abduction helps us to deal with such an issue. According to Ragin (and discussed in Ten Have, 2004), research is understood as a process that takes the researcher from his/her general ideas (ontology) through mediating structures (epistemologies, analytical toolkit) to create an understanding of some specific evidence that, in turn, results in the construction of images (or representations) of social life. This is done through reiterative processes of deduction and induction to end up in the so-called 'retroduction', i.e., the result of the research process in terms of the creation of images of social life that are obtained by using specific epistemological (and methodological) lenses. Different kinds of texts (or documents, or inscriptions) thus mediate the study of some original phenomena (Ten Have, 2004). This means that in qualitative research what is created is a range of "theoretically structured descriptions of the empirical world that are both meaningful and useful" (Ragin as cited in Ten Have, 2004: 9). Qualitative research, in other words, deals with the complexities, and the ways in which interpretive communities can gain an understanding of such complexities, of the empirical world out there. It is the exploratory nature of qualitative research that allows for these kinds of tasks. However, to depict the utterly complex outer world using documents and inscriptions implies generalizations that may 'kill' the phenomenon under scrutiny. This tension between complexity and the need to convey in two dimensions a phenomenon that is three dimensional and multimodal is interesting and gives rise to a range of methodological and theoretical concerns that deal with issues of reliability, validity and generalizability. Abduction works in similar ways, allowing the researcher to create new knowledge, and thus to generate theory, on the basis of the creativity that is needed in order to account for specific phenomena that fail to fit within the realm of previous theories or propositions. Abduction helps us to explain issues of representation in terms of 'frames' and 'rich points'. In other words, such rich points occur in the data when the researcher's world views (included his/her epistemological assumptions taken from his/her research training

and a specific body of literature) is not in line with how the behaviour seems to unfold in the strip or sequences of (inter)action captured in, e.g., interviews, recordings and/or participant observations. It is a reiterative process (as in retroduction), only here, new frames are needed to explain the previous ones in a constant movement, until it is found that one frame X (including its strip of behaviours and rich points) could explain another frame Y previously found in the data and so on (Agar, 1996). Ethnographic description was then, in this project, “a collection of ethnographic miniatures” (Geertz, 1973: 20) that, in concert with the conceptual world in which we position ourselves as scholars, provided us with tools to converse with and understand the data.

For the process of data creation and analysis in the CINLE project data set the following steps were followed:

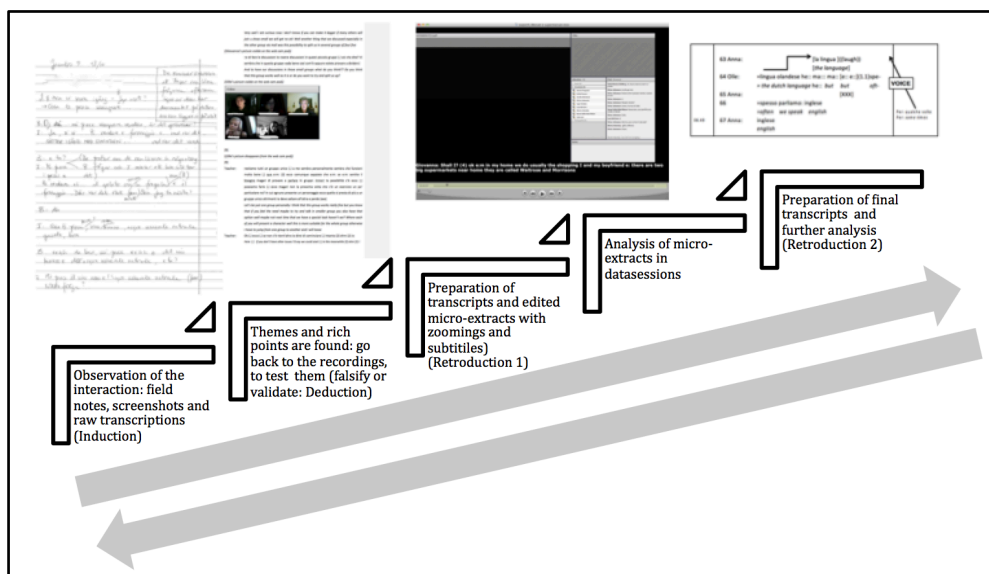


Figure 6: The process of data creation and analysis in the CINLE process. The pictures above each step are examples of the documentation created at each point of the process. The process was also reiterative (hence the arrows).

The process of data-creation illustrated in Figure 6 was not a solitary endeavour. As a member of the CCD research environment, collaborative work with research colleagues who shared an interest on issues of multi-modal analysis and representation was central in the process of knowledge

production⁴⁰. The first step, the observation of the recordings, was largely inductive: I and my co-author (in studies I, II & III) approached the data as open-mindedly as possible, in order to ‘see’ what was going on during the encounters. However, the first level of analytical observations, discussions and choices that we made were guided by an interest in understanding participants’ languaging and negotiation of meaning in virtual settings. Here we decided to focus upon the analysis in the breakout groups of the Ita I data set; this choice was shaped by the first level observations of the 30-minute plenary meetings that were primarily teacher-centred, and where students largely participated in ‘naturally occurring’ encounters with little or no oral or written contributions⁴¹. This is not to say that those meetings are not analytically interesting; indeed, they could be used to validate the hypothesis which arose during the analysis of the other data set, Ita III, during which the teacher is present in all meetings. However we decided to focus on the student-only meetings in the Ita I for the more detailed analysis. Such meetings were observed several times, until we could find some overarching patterns as well as points in the data that were analytically relevant. At this point we proceeded with a more detailed transcription of short extracts that were also re-recorded using the screen recording software Camtasia. This software allows editing and file formatting, so that we could produce high-quality videos with subtitles and the ability to zoom into analytically interesting sections of the screen.

Table 1 and 2 are illustrations of the data (both Ita I & Ita III) in terms of the number of recordings of the online sessions that have been observed, roughly transcribed and mapped. Field notes were taken while reviewing the recordings before making the selection of rich points in the data, in terms of short excerpts (a few minutes) in Camtasia. Those first

⁴⁰ Such collaborative work occurred throughout the years (since the start of the CINLE project in 2010, and continues) during data sessions, paper presentations at a number of both national and international conferences and visits to international environments that share a focus on the study of interaction and digital technology (see the Appendix for more information about some of these activities in the CINLE project).

⁴¹ We have chosen to define the conversations in focus in the analysis as ‘naturally occurring’. This highlights our vantage point in the data analysis which was not from the position of experimental studies or action research. The data created in the CINLE project include a series of encounters with the eye of the researcher present as a red dot in the right hand corner of the screen in the videoconferencing platform, marking that the meeting was being recorded.

multimodal transcripts and videos were shared with other researchers during data sessions. Further analysis was conducted after the sessions, and the transcripts were re-worked on a more detailed level. At this point we also decided what actions to keep in the multimodal transcript and what to leave out because its level of complexity was rather high for this stage of the research (see Figures 7-9 for some examples of transcription in the studies).

Table 1: Video recordings of lessons: Ita I.

Ita I				
Session	Typology	Participants	Time	Camtasia recordings
1	Plenary	1T; 12S	50 min	
	Plenary	1T; 9S	50 min	
	Plenary	1T; 6S	50 min	
	Plenary	1T; 12S	50 min	
	Breakout 1	5S	46 min	
2	Plenary	1T; 8S	27 min	
	Breakout 1	3S	35 min	
	Breakout 2	3S	57 min	
3	Plenary	1T; 6S	38 min	
	Breakout 1	3S	24 min	
4	Plenary	1T; 8S	34 min	From Breakout 1: "Si tratta della vita umana" 03:34 Study I "Vad ska vi göra?" 02:45 "Vi har väl pratat ut ganska väl du och jag" 00:40
	Plenary	1T; 5S	34 min	
	Breakout 1	2S	26 min	
	Breakout 2	3S	27 min	
5	Plenary	1S; 7S	34 min	From Breakout 1: "Poltiglia d'avena" 02:47 Study I "Cosa mangi per colazione" 04:13 "Le lenticchie" 05:23 Study I
	Breakout 1	2S	29 min	
6	Plenary	1T; 6S	28 min	From Breakout 1: "En quiche i ugnen" 00:59
	Breakout 1	3S	22 min	
7	Plenary	1T; 7S	20 min	From Breakout 1: "Il mio carattere" 01:01 Study III "Presenta un amico" 01:17 Study III Whole session 26:05
	Breakout 1	3S	27 min	
8	Plenary	1T; 8S	33 min	From Breakout 1: "Blockchocklad" 02:35
	Breakout 1	3S	31 min	
9	Plenary	1T; 6S	32 min	From Breakout 1: "Vad har du för hund?" 02.00
	Breakout 1	3S	15 min	
10	Plenary	1T; 6S	36 min	From Breakout 1: "Fai spesso delle gite?" 08:24 "Italia e Francia" 04:37
	Breakout 1	3S	29 min	

Key: T (Teacher); S (Student)

Table 2: Video recordings of lessons: Ita III.

Ita III				
Session	Typology	Participants	Time	Comments/Camtasia recordings
3	Plenary + Task related 1	1T; 9S	60 min	From Plenary + Task related 1: "Is Macedonian similar to Serbian?" 04:34 Study II "I live six months in Sweden and six in Madagascar" 04:20 Study II
	Plenary + Task related 2	1T; 9S	60 min	
4	Plenary + Task related 1	1T; 10S	61 min	From Plenary + Task related 1: "Examples of web-cam interactions" 05:00 "Regali" 12:00 Study III
	Plenary + Task related 2	1T; 11S	52 min	
6	Plenary + Task related 1	1T; 10S	61 min	
	Plenary + Task related 2	1T; 8S	66 min	
7	Plenary	1T; 17S	122 min	This session was devoted to grammar issues with the whole group.
8	Plenary + Task related 1	1T; 8S	60 min	From Plenary + Task related 1: "Mercati e Supermercati" 02:06 Study III
	Plenary + Task related 2	1T; 8S	56 min	
9	Plenary + Task related 1	1T; 10S	59 min	
	Plenary + Task related 2	1T; 6S	61 min	
10	Plenary + Task related 1	1T; 10S	60 min	
	Plenary + Task related 2	1T; 7S	61 min	
11	Plenary + Task related 1	1T; 5S	60 min	The Breakout group 1 met on the researcher's request, without the teacher at the same time as Plenary + Task related 1. Recording of the whole session (31 min). Study II
	Plenary + Task related 2	1T; 8S	54 min	
	Breakout 1	4S	31 min	

Key: T (Teacher); S (Student)

Throughout this whole process (see Figure 6, Tables 1 & 2), the analysis revealed themes and patterns in the data that we found particularly interesting in relation to the aims and issues of the CINLE project in general and of the four studies included in this thesis in particular. Thus we went

‘back to field’, but this time with a more specific focus. In fact, at this stage, the process of looking was not as unmotivated (Hutchby & Wooffitt, 1998; Psathas, 1995) as at the beginning of the data creation, as we were now asking more specific questions to the data. We avoided creating hypotheses at the beginning of the process and opted for a constant movement between focused and extensive analysis during the whole process (Silverman, 2013). Also, we realised that access to the course material that was shared before, during and after the meetings was necessary, so we proceeded in retrieving, organising and archiving this data set as well, which has been embedded in the transcript and the analysis either as screenshots or appendixes in final drafts of the studies. The movement between focused and extensive analysis, between macro and micro scales (Scollon & Scollon, 2003) allowed a representation of the data that included both (see studies I & III) and that can be valuable in making visible what is taken for granted in the interaction and to find how these different units of analysis relate to one another. However, one of the main issues with such an approach is that a detailed research design is difficult to frame from the beginning. The relatively specific empirical material to which we had access soon revealed its limitation: while we do not know what participants are doing behind the screen of the video-conferencing software, we do have access to their activities in it. One exception is one student’s hand-written notes, which the student shared with me on my request. However, we decided to do this only after we realised that access to these kinds of literacy practices was also of analytical relevance for the issues we wanted to find answers to (see Study III). On the other hand, this largely inductive process (from the very beginning, at least) was a valuable method for approaching the data in an unbiased way; not knowing in advance what is sought is indeed at the core of ethnographic research in general and of ethnomethodology in particular. What I am interested in is the study of people’s synchronous interaction mediated by technology (in a broad sense) where participants have a rather specific agenda: learning a new language.

In the next section I introduce some key concepts of CA and ethnomethodology (more specifically in relation to language learning) and how these have been used in the process of preparation of transcripts and in the analysis.

Ethnomethodology and conversation analysis in the study of synchronous computer-mediated communication

In ethnomethodology (EM) and conversation analysis (CA) it is important that the analysis follows a process of what Sacks defined as ‘unmotivated looking’ at the material (Hutchby & Wooffitt, 1998; Psathas, 1995). This is also the kind of approach that has been used in the four studies included in the thesis when dealing with the analysis of talk in interaction in online seminars. The term ‘talk in interaction’ refers to the peculiarity of CA in being concerned with verbal interaction “as instances of the situated social order” (Hutchby & Wooffitt, 1998: 23).

CA depends on the reproduction of a determinate social event and offers a way of representing the data that allows the reader to reproduce the analysis, since it is possible for him/her to go back to the transcript and look at the same data as the researcher – alone and together with others. This is not the case for other ethnographic data, such as field notes, where the analytic account is done *a posteriori*, as well as the reconstructed version of what has happened in the setting (Hutchby & Wooffitt, 1998: 33).

CA, as developed out of Sacks’s work, aims to see the “order of conversation” in its structural resources (turn-taking, adjacency pairs, repair, preference) at the interface between context-sensitive and context-free applications, with the aim of illustrating how words can be both deeply embedded in their context, but at the same time organized in procedures of a rather general character (Mondada, 2006: 119). In this perspective, according to Schegloff, “[m]eaning lies not with the speaker, nor the addressee nor the utterance alone [...] but rather with the interactional past, current and projected next utterance” (Linell, 2009: 179), in other words, the co-text of the conversation. This leads to the notion of *indexicality* and context, or setting, and words like *here* and *there*, or *this* and *that*. Mondada explains, drawing from the work of Garfinkel, that indeed one of the major issues addressed in CA is the investigation of the properties of indexical expressions as a result of organized practices of everyday life (2006: 115). According to Seedhouse, *indexical knowledge* “is not just something in the environment, but also something talked into being by interactants” (2004: 7). This is of special interest to us dealing with the study of SCMC, since the physical environments in which the students are located are partially curtailed in the virtual classroom. For example, early observations of the data set in Ita I showed how this issue of participants’ (as well as the researchers’) limited access to one another’s physical con-

text was topicalized in conversation *because* the offline world of each participant made its entry in the online one, in some way or another (see Study II). This is also connected to the principle of *reciprocity of perspective* (Schutz, 1967) that functions in a way that allows interactants to come to an agreement to follow “the same norms, to show affiliation with the other person’s perspective and to try to achieve intersubjectivity” (Seedhouse, 2004: 9). Luff et al. (2003) draw on the same principle of reciprocity of perspective as well as *interchangeability of standpoints* to describe how participants in a situation of online collaboration take for granted that “what they see and how they see it corresponds to how the co-participant sees and views the environment” (Luff et al., 2003: 55).

The *normative accountability* principle is related to the reciprocity of perspective because it entails an understanding of the norm as seen but unnoticed. The classic example is with greetings: if one social actor greets another, the norm is that the second answers the greeting. If the actor does not, he/she is considered accountable for that behaviour (of refusing to answer the greeting or other adjacency pairs). These norms, however, are not rules to be followed slavishly but rather as “points of reference through which we can design and perform our social actions, analyse and evaluate the conduct of the other, draw conclusions, and hold the other accountable” (Seedhouse, 2004: 10).

In the context of SCMC, social actions can take different forms in different modalities (as in face-to-face interaction); adjacency pairs can occur across modes and thus, if one participant fails to notice the first position, he/she is held accountable for it. The social norms are so compelling that other participants may orient to the first turn in another mode to ‘try again’ and give the former recipient a second chance to follow the norm (Study III). One specific feature of the data set included in the four studies in this thesis is that it is institutionally framed within a language course in higher education in the geopolitical spaces of Sweden. Therefore the conversations follow certain norms and principles that are in line with the literature on classroom interaction (see e.g. Drew & Heritage, 1992; Macbeth, 2004; Mehan, 1985; Sahlström, 1999; Sinclair & Coulthard, 1975). More specifically, the constant tension between form and meaning, or form-and-accuracy and meaning-and-fluency contexts (Seedhouse, 2004: 136), is a very predominant pattern in the data set as well (see also studies I, II & III).

What Seedhouse, and other CA-oriented researchers, choose not to attend to is the multimodal character of all conversations. The transcription

formats and conventions in CA are such that it is possible to detect the exact length of pauses, overlaps, which words are stressed, laughter, breath, and other signs that are interpreted as meaningful in the conversation. The process of transcribing is indeed a way of interpreting the material from a mode to another and the analysis of the material begins with the transcription procedure: “[b]ecause CA is concerned with how people manage and accomplish the sequential order of talk-in-interaction, transcription is, first of all, an attempt to capture talk as it actually occurs, in all its apparent messiness” (Hutchby & Wooffitt, 1998: 75). However, not accounting for other modalities than the orally oriented one means that the transcription is biased towards a convention that sees oral interaction as the only one deserving analytical attention (Bagga-Gupta, 2012).

As a consequence, previous studies on online synchronous interaction (e.g., Hampel & Hauck, 2006; Hampel & Stickler, 2012; Lamy, 2004; 2012) inspired us to find alternative transcription systems that could account both for the sequentiality and the synchronicity afforded by the range of semiotic resources (i.e., “the actions, materials and artefacts people communicate with” [Jewitt, 2011: 16]) that the participants in the interaction choose to use in the environment. As previously outlined, the interest in participants’ use of a particular language variety (considered the target language in the course) is only one aspect of the focus of the studies included here. What interests us is languaging in virtual learning sites, more specifically, how the resources that are at hand are used to make meaning in the situated interaction. Thus, our approach to the situated interaction as ‘text’ in its wider meaning has been to focus on the whole as well as at the boundaries; i.e., how language varieties are negotiated at the same time as the resources used may take different forms and different meanings depending on the person who is producing the message, the language varieties used and in which mode. An issue that we needed to deal with early in the project was the unit of transcription, where there were different modes that were integral parts of the interaction (see also Flewitt et. al, 2011). To represent this complexity, we started with a traditional CA transcription system. In studies I and II, we introduced screen shots of the chat tool used in the environment (see Figure 11). The screen

shots were embedded in the transcript in the sequentiality of the interaction, as representing a turn-at-talk⁴².

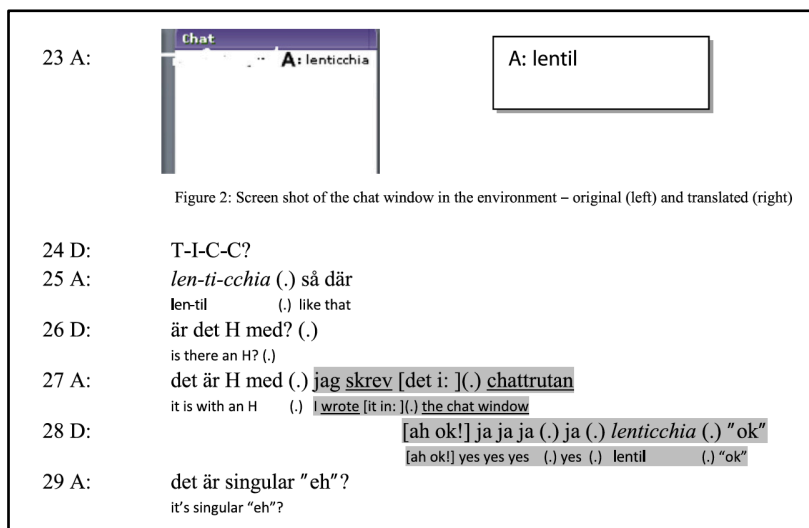


Figure 7: Example of transcription system using screen shots. (Study I).

However, the interlocking of different modes is at times difficult to represent as separate turns, since participants use the chat tool as a parallel conversational floor. In this case we used a table with different columns to represent a timeline, the oral talk, and the written mode afforded by the

⁴² The Communication, Culture and Diversity (CCD) network-based research environment at Örebro University includes a number of research projects, in addition to CINLE, that deal with issues of multimodal analysis and methods (see e.g. Bagga-Gupta, 2012b; Bagga-Gupta et al., 2014; Bagga-Gupta & St John, 2015; Gynne, forthcoming; Gynne & Bagga-Gupta, 2013; Holmström, 2013). These have been important points of departure in the analytical work that is presented in this thesis. In addition, a focus upon ‘naturally occurring’ interactions in projects since the latter half of the 1990s inside and outside institutional settings where participants use Swedish Sign Language (in addition to oral and written Swedish) forced CCD members to go beyond CA representations and experiment with alternative representational issues. This work in the Deaf Studies domain at CCD has shaped our analytical viewings of data in settings where Swedish Sign Language (and its visual modalities) are not present.

chat tool. In addition, since the sequentiality of talk did not rely solely on the oral mode, it became necessary to include a transcription system that would account for the chaining that occurred across modes as well as literacy practices online and offline (see Figure 8 below).

Time	Voice	Chat-tool
00.54	01 Giovanna: vado io? (4) ok e:m nella mia casa facciamo di solito <i>Shall I? (4) ok e:m in my home we do usually</i>	
	02 la spesa insieme io e il mio fidanzato e: sono due <i>the shopping I and my boyfriend e: there are two</i>	
	03 grandi supermercati vicino a casa si chiamano (xxx) <i>big supermarkets near home they are called (xxx)</i>	
	04 e morrisons preferisco (xxx) perché sembra più <i>and morrisons I prefer (xxx) because it seems more</i>	
	05 organizzato e i prodotti sono migliore ma sfortunato <i>organised and the products are better but unfortunately</i>	
	06 è più costoso là quindi normalmente facciamo la spesa al <i>it is more expensive there therefore normally we do the shopping at the</i>	
	07 morrisons e quando vogliamo comprare qualche prodotto con qualità <i>morrisons and when we want to buy some quality product</i>	
	08 allora andiamo al waitrose e poi per comprare la frutta e le verdure <i>then we go to <u>waitrose</u> and then to buy fruits and vegetables</i>	
	09 preferisco di andare al mercato dove abito adesso sono tante frutterie e mercati <i>I prefer to go the market where I live now there are a lot of fruit stores and markets</i>	
	10 all'aperto che vendono la frutta fresca e quando sono in tempo vado là <i>that sells fresh fruit and when I manage I go there</i>	
02.01	11 ma l'unica cosa è che le frutterie chiudono presto verso le sei e quindi <i>but the only thing is that the fruit stores close early around six and</i>	Teacher: esiste ancora Europa Foods, Giovanna?
	12 tante volte non ho tempo per andare dopo il lavoro e devo comprare anche <i>therefore a lot of times I don't have time to go after work and I have to buy also</i>	Teacher: Does "Europa Foods" still exist Giovanna?
02.42	13 la frutta e la verdura al supermercato e questo è un peccato perché qui <i>fruits and vegetables at the supermarket and this is a shame since here</i>	

Figure 8: Example of transcription using arrows to highlight chaining across modes and literacy practices, online and offline (Study III).

Thus, chaining as an analytical construct helped us to *visually* represent and map the ways in which languaging is afforded and constrained by the set of semiotic resources that are at hand. These also have a repercussion on how participants orient towards one another in the oral mode, due to the fragmented character of CMC and which also needs to be taken into consideration and illustrated using alternative transcription systems:

The transcription is presented in a list format with line numbers and speaker names. It includes Italian text, English translations in parentheses, and laughter markers. Angled arrows on the right side of the text indicate the flow of interaction: from line 11 to 12, from line 13 to 14, from line 15 to 16, and from the 'SILENCE (6)' block to line 17.

11 Pamela: e: non so ((*laugh*)) e:m è difficile (2) ma forse e:m: m:
well I don't know ((laugh)) e:m it's hard (2) but maybe e:m: m:

12 Anna: dipende chi è la persona che: ti (.) ha (.) regalato (.) forse?
it depends on who gave it (.) to (.) you (.) maybe?

13 Pamela: e: ((*laugh*)) e: sì e: se è m: mia famiglia e:m (.) h: avete comprato qualcosa che non mi
e: ((laugh)) e: yes e: if it is my family that bought something

14 piace h: io (1) e:m io: (.) e: dico e: (.) a loro che non mi piace ma forse h::: e:che è
I don't like: I (1) tell e: them that but perhaps if it is

15 un'amica non so ((*laugh*))
a friend I don't know ((laugh))

16 Anna: sei obbligatoria tener-ten-tenere il regalo! ((*laugh*))
you have to ke-kee-keep the present! ((laugh))

SILENCE (6)

17 Pamela: che significa: tenere?
what does keep mean?

18 Anna: e: (1) penso che tenere è un verbo e:m (.) non regalare a qualcun altro e:
e: (1) I think that keep is a verb (.) not to give away to someone else e:

Figure 9: Example of transcription using angled arrows to represent participants' mutual orientation in the oral mode (Study III & Study IV). See also the transcription key at the end of this chapter.

The different transcription conventions (see also the transcription key) in the four studies included in this thesis and exemplified here all highlight my interest in studying how students and teachers manage the different semiotic resources of the video-conferencing programme. This has also been an important criterion in the selection of extracts to transcribe and analyse in detail. We were looking for instances in which participants made use of different modes simultaneously with the aim of understanding how they made use of a certain mode for a certain purpose, if this was the case. Study I gives a number of examples in this direction (see also Figure 7). We were also focusing on identity formation, or issues of trajectories from novice to more-experienced participation. This interest pointed us towards the analysis of instances in which students were orienting towards different language varieties as well as the physical location from which they were joining the virtual classroom. Study II deals with such issues. It is also important to highlight that in order to make visible participants' use of different language varieties, original languaging has been retained in all transcriptions and a verbatim translation in English is provided (see transcription key). Finally, we realised in the preparation of Study III and IV that a broader perspective was necessary to understand the learning process of individuals across time and space, literacy practices and modalities. Figures 8 and 9 exemplify this attempt by illustrating how participants' orientation towards a range of literacy practices is highlighted in order to better understand the context of the turn-at-talk. This in turn has implications for how the conversation is likely to unfold in the oral or written mode, or both, and for how participants orient towards one another's contributions in the same mode (Figure 9) or across modes (Figure 8).

Ethical considerations

Empirical access to the online interactional and textual material in project CINLE was granted after having gathered the informed consents from each student participating in the courses that were in focus. Information about the project was shared via e-mail with each student and teacher as well as through my participation during the courses' first meetings in Adobe Connect. The interactional data was created through screen recordings of the weekly meetings, enabled by an application embedded in the video-conferencing program. Students and teachers were reminded on each occasion that they would be recorded. Here it can be noted that the online recording system is much less obtrusive than, for example, a video

camera inside a physical classroom. Thus, the participants in the meeting could perhaps more easily forget that they were, in fact, being recorded. Androutsopoulos accounts for the researcher in netnography as an “invisible observer”, due, he argues, to less straightforward ethical regulations surrounding internet observations (2008: 9). The Association of Internet Research (AoIR)⁴³, which is international in scope, deals with the creation of ethical guidelines for conducting internet-based research in an ethical and professional manner. There are two documents made available by AoIR, the latest from 2012, in which guidelines (rather than a firm set of regulations and codes) are provided to assure what they call “a dialogic, case-based, inductive, and process approach to ethics” (AoIR, 2012: 5). I argue that internet-based research in general and netnography in particular must deal with emergent issues on, e.g., how to ensure confidentiality in a field where with the click of a mouse one could retrieve the whole thread of discussion and thus the (nick)names of the participants whose identity one so carefully wants to protect. On the other hand, when studying data that is publically available (e.g., in the case of certain discussion fora, or YouTube open channels) where is the boundary of one’s professional duty as a researcher to make him/herself visible to the participants, to ask for consent (see also Kozinets, 2010)? There are no straightforward answers to these issues. However this cannot be the end of the story; there is a need to discuss and be reflexive about ethical issues, and most of all, to highlight that this is nothing inherently new and attached to the field of the internet. Rather, it could be considered one of the many consequences of globalisation in terms of the movement of people, language varieties and cultures across the globe, both physically and digitally, to which the internet is both a cause and an effect. However, for the purposes of this thesis, the institutional frame of the course entailed that the participants in the studies are also students in a course and their contributions recorded in the data are stored in a server to which only authorised persons have access. It is very unlikely that the people in the recordings can be traced by a Google search. The names of participants have been changed, even during the process of observation, the writing of field notes and during closed data sessions as well as during paper presentations at conferences to insure a certain degree of anonymity.

One important ethical aspect that needs to be highlighted in relation to this thesis is the issue of the field which is not bound to one space but is in

⁴³ See AoIR webpage on <http://aoir.org/about/>

fact as fractured as the number of people participating in the project. One way of dealing with such complexity is to maintain contact with each participant to ask him/her to provide material such as course-related notes that were not shared in the public spaces of the virtual classroom⁴⁴. An ethically-responsible online scraping will contribute towards a more substantial understanding of the field on the one hand, and towards the creation of very large data sets on the other. However, this is in line with ethnographic data-creation *tout court* and not only in relation to digital research field(s). My take on netnography and digital anthropology is that such access to potentially very extensive amounts of data is not different from qualitative research methods in the so-called pre-digital age. Rather, there continues to exist a need to know what to focus on and what to leave in the background in the analysis (see also Messina Dahlberg & Bagga-Gupta, 2015; Bagga-Gupta et al., 2014).

Summary

The data sets generated in the four studies included in this thesis are part of the larger CINLE project and include recordings of online sessions from two Italian for Beginners courses, Ita I and Ita III. The multimodal analysis of the interaction takes into account a range of aspects of the communication situation in relation to the aim and key issues of this thesis. Firstly, the analysis provides a representation of how the different modes and language varieties are put to use in the moment-by-moment interaction in virtual learning sites. An analytical aperture on participants' languaging in concert with tools provides the opportunity to discern patterns and strategies in the data and to compare different encounters over time (see, for example, Study III). Secondly, by focusing the analytical gaze at different scales (the micro-scale focusing on the moment of the turn at talk and the meso-scale focusing on the organisation of the instructional meeting and the course as a whole) has given the analysis both depth and a comprehen-

⁴⁴ As we did in the CINLE project. The request for additional material from the students was, however, not an easy task. To ask participants a range of issues and questions, to do things for us as researchers, is part of the commitment they made when they signed the informed consent forms. However, from an ethical perspective, to decide whether what we ask of participants will be more beneficial for the research or harming for the students (in terms of using their time and effort) is a very difficult endeavour in ethnographic research. See also the rules and guidelines of the Swedish Research Council <http://www.codex.vr.se/en/>



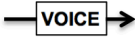

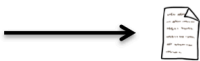


siveness that can shed light on the complexity of everyday instructional online interaction from a range of different angles.

Transcription Key

<u>Underlined</u>	denotes that the word is focally accented
?	rising intonation, not necessarily a question
!	strong emphasis, with falling intonation
(.)	micro- pause
(1)	pause in seconds
((<i>laugh</i>))	verbal description of actions noted in the transcript, including non-verbal actions
(xxx)	indicates a stretch of talk that is unintelligible to the analyst
e:m	one or more colons indicate lengthening of the preceding sound
no-	a hyphen indicates an abrupt cut-off, with level pitch
SOME	indicates loud voice
=	indicates that there is no gap at all between the two turns

In the English translation

<i>Italics</i>	original utterance in Italian
Bold	original utterance in English
Bold	original utterance in Spanish

	indicates chaining between turns in the same mode
	indicates chaining between turns in the different modes (from oral to written)
	indicates chaining between turns in the different modes (from written to oral)
	indicates chaining between oral contributions and WB
	indicates chaining between oral contributions and one student's offline notes
	indicates chaining between oral contributions and course material displayed on the WB
	indicates chaining between oral contributions and course material not displayed on the WB

5. Linguaging in virtual learning sites

Let us go back to where we started: mapping interaction as it unfolds in online encounters through different modes across the glocal spaces of the virtual classroom has been a central interest in this thesis. The primary goal here has been to find ways to represent the fractured ecologies of a field where potentially every tool and inscription can be captured and stored in digital format. In this final chapter I provide a condensed overview of the studies. Part 1 of this thesis ends with a discussion of the findings in relation to its aims and the theoretical background presented in Chapter 3. Finally, comments on the limitations of the thesis and some pointers towards future research are provided.

The Studies

Study I: Communication in the Virtual Classroom in Higher Education: Languageing Beyond the Boundaries of Time and Space

Giulia Messina Dahlberg and Sangeeta Bagga-Gupta (2013)

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Study I deals with the analysis of classroom interaction in online synchronous communities within higher education. The analysis is two-fold: we provide an overview of the interactional patterns at the general lesson level in the data complemented by a micro-interactional analysis of selected slices of everyday life from two weekly meetings. Using sociocultural lenses, we analyse the situated interaction within the institutionally framed agenda of an online course where students are learning a new language variety, in this case Italian. The analytical tools of conversation analysis are used to investigate students' languageing practices in the kinds of online synchronous settings in which participants have access to a range of semi-otic resources to make sense of one another's contributions as well as the task at hand. In this particular study, we analyse the interactional patterns using different magnification powers on the data that include a series of encounters during the Ita I course examined in the CINLE project.

We explain the general organization of the course in terms of cyclic course patterns, in which the synchronous encounters (both teacher-led and student-only) occur in a middle space between the preparation of the assignments at the individual level by each student (in line with the weekly course plan) and the finalization of the task, also at the individual level, when the assignment is to be handed in to the teacher (see Figure 10 below). Such an overarching focus on the data becomes of analytical relevance for us because it makes visible the central position of the online seminars as the locus where participants, in concert with the tools they have at hand, negotiate the institutionally framed agenda of the course.

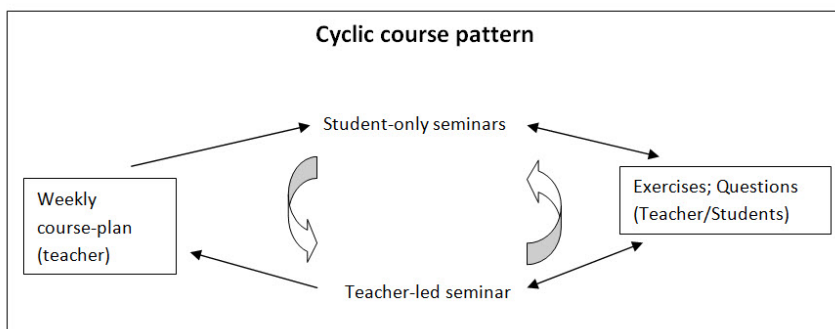


Figure 10: Cyclic course pattern in an online language course (Study I).

A more detailed analytical focus, i.e., the analysis of the organization of time, space and interactional flow of each student-only meeting, allows for the identification of three phases: an introduction phase, a core phase and a concluding phase. This kind of analysis illustrates the overall patterns of participants' negotiations of time and space dimensions through the use of specific discourse markers and expressions that are used as boundary markers in interaction between the different phases.

Table 3: Examples of discourse markers and expressions during the three phases (Study I).

Phase 1 "Introduction"	<i>Hallo? Hör ni mig?</i> (Sw. hello? Do you hear me?) <i>Hej, hej, nu är jag här</i> (Sw. hello, now I'm here) <i>När har du fått den?</i> (Sw. when did you get it?) <i>Det står även i schemat för vecka 43</i> (Sw. it stands also in the week plan for week 43) <i>Hade du gjort de där uppgifterna?</i> (Sw. did you do those exercises?)
Phase 2 "Core phase"	<i>Ska vi köra igång?</i> (Sw. Shall we begin?) <i>Kör du, om du vill</i> (Sw. you go, if you like) <i>Vad heter det...</i> (Sw. how do you say...) <i>Såg du vad jag skrev?</i> (Sw. did you see what I wrote?) <i>Jag skrev det i chatten</i> (Sw. I wrote that in the chat) <i>Un momento</i> (It. one moment) <i>Capito!</i> (It. understood!) <i>Sì</i> (It. yes) <i>Just det</i> (Sw. that's right)
Phase 3 "Conclusion"	<i>Vi har varit duktiga</i> (Sw. we have been good/clever) <i>Jag vet inte... vi har väl prata ut ganska väl du och jag...</i> (Sw. I don't know, we have been talking quite well you and I...) <i>Så trevligt att träffas!</i> (Sw. so nice to meet you!) <i>Ha det så bra</i> (Sw. have a nice evening) <i>Nu är jag hungrig</i> (Sw. now I am hungry)

At a micro-level of analysis, we focused upon the meetings during which the students were in small break-out groups of two or three, without teacher supervision. These encounters were of particular analytical relevance due to our interest in the study related to understanding participants' communication strategies in an environment in which they have limited access to one another's physical setting and bodies. The observation of student-only meetings allowed us to perform a micro-level analysis of cases in which students handle the multimodality of the setting. For instance when mutual attention is achieved as well as of ways in which students' identity positions shift from more expert to novice and vice versa. At the micro-level, the analysis highlighted that, while it is difficult to evaluate and map students' learning process at the individual level, it is possible to follow the trajectories of participation in terms of the use and re-use by participants of new semantic units in the Italian language variety in appropriate ways. In addition, we could make visible how students drew from the resources they had at hand (more specifically within the spaces of the online environment but also of their physical setting) to achieve the institutional tasks of communicating in the Italian language

variety (see Figure 7 in Chapter 4 for an example of a transcript and analysis). The results show that the semiotic resources used by students dialectically shape how participants get positioned within the virtual community culture of the virtual classroom examined in this study. These identification processes function as ways of enriching and nurturing learning, both of appropriating the target language variety, as well as enabling *relevant* ways of being in *multimodal, multilingual* communities of practice.

Study II: Understanding Glocal Learning Spaces. An Empirical Study of Languaging and Transmigrant Positions in the Virtual Classroom

Giulia Messina Dahlberg and Sangeeta Bagga-Gupta (2014)

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Study II focuses on the analysis of recorded sessions of the third term of study of the data set included in the CINLE project. The interests in this study relate to accounting for how participants negotiate different language varieties, including modalities, and how communication in virtual learning settings enables both flexible participation trajectories and identity positions in and across the boundaries of time and space. The study also aims at developing an augmented transcription model that draws from the epistemological positions of conversation analysis but also attempts at encompassing the languaging, including the modality rich practices of students that have arisen during the observation and analysis of the data.

The analysis of micro-extracts of two encounters from the Italian for Beginners III course draws on sociocultural and dialogical framings and highlights the fluidity of ‘glocal’ positions and languaging that emerge in and across time and space in technology-mediated communication. The concept of glocality is used to frame the mutual interpenetration of the global and the local in the online learning setting of the virtual classroom (see also Chapter 3 above for a further discussion on this issue). In these spaces, communication can occur on different conversational floors simultaneously, thus allowing for alternative patterns in the conversation. The analysis confirms the interactional patterns highlighted in Study I, in which participants orient towards a range of identity positions, depending on the communicative tools and the language varieties that are at hand. In the data set examined in Study II (from Ita III, see Table 2 in Chapter 4 for an overview), the analysis shows further that the teacher is orienting towards the position of the expert, i.e. one who provides relevant cues for the students when they use inappropriate semantic units or constructs in the target variety. The teacher’s metalinguistic comments usually occur in the written mode, and they refer to specific aspects of the students’ oral contributions. The students, in turn, orient towards the teacher’s comments in the written mode, thus engaging in a parallel floor, while the oral conversation among the other students continues.

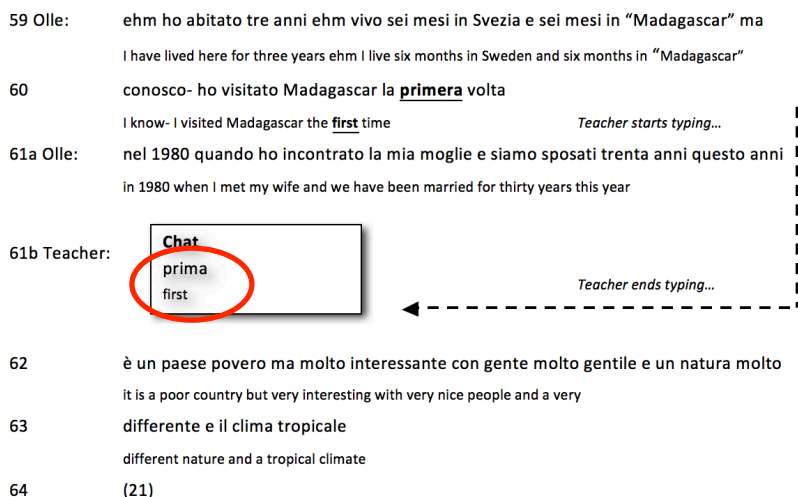


Figure 11: Example of teacher feedback and parallel conversations (Study II)⁴⁵.

Figure 11 illustrates a common pattern in the Ita III data set: the teacher uses the written mode of the chat tool afforded in the online environment to provide feedback on issues of metalanguage, *at the same time* as the student(s) continue(s) to engage in his/her/their contribution(s) in the oral mode, using the microphone. The relatively long stretch of silence in line 64 (21 seconds) occurs between the end of Olle's oral talk and the next student's oral contribution. However, while the participants' microphones are silent, the chat tool reveals that another communicative activity and conversational floor is going on at a parallel level. Olle and the teacher are busy conversing in the written mode during this oral silence as illustrated in Figure 12:

⁴⁵ The quotation marks in Figure 11 denote an utterance coherent in many language varieties.

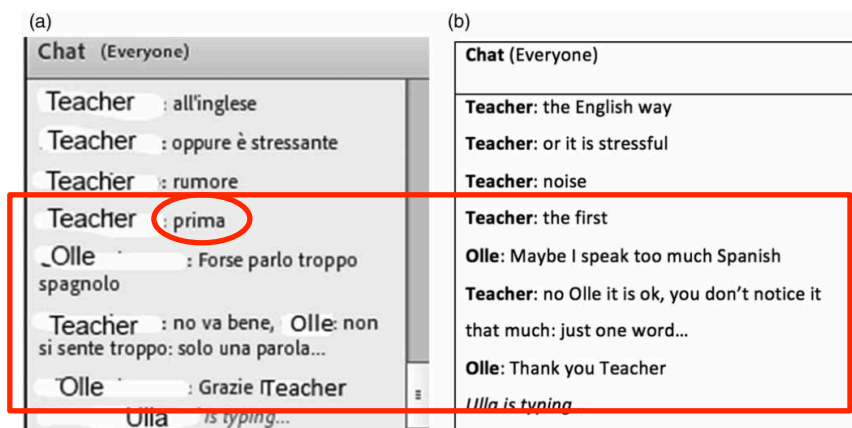


Figure 12: Teacher and student conversation in the chat tool in Connect. Image (a) is a screenshot of the languaging in the tool; Translation available in (b).

Figure 12 illustrates the parallel conversation between Olle and the teacher after Olle's contribution in the oral mode. Note that by only looking at the chat tool space, one can follow previous conversational threads during which the teacher oriented towards the other students' contribution as well (the first two contributions are addressed to one student and the third one to another). The contributions marked by the red box are generated after the teacher's feedback (visible in Figure 11, line 61b) where he orients towards Olle's use of the Spanish variety in the word item *primera* (line 60). The teacher's contribution (in the red oval in Figure 11 and Figure 12) is publicly visible in the chat tool for all participants. Olle attends to the teacher's comment (providing the Italian correspondent term, *prima*), after one minute and 20 seconds; this initiates a written exchange that, although publicly available for everyone in the online space, transpires exclusively between Olle and teacher. Such exclusiveness is pragmatically marked by the teacher's and Olle's vocatives, thus highlighting a

common feature of CMC, in which limited visual access invokes the need for clarity in addressing one another.

The results further show that the concept of chaining allows us to report on how the parallel modes (written and oral) are intricately linked by mapping how participants maintain coherence and cognitive focus during the encounters. Furthermore, the use of a range of language varieties is made visible in the representations as well as in the analysis by means of different transcription conventions; this highlights the fluid and hybrid nature of languaging in virtual sites. The analysis shows that different language varieties are deployed for a number of reasons, i.e. not only for compensatory reasons when access to the appropriate Italian item is not available. The study highlights how other language varieties such as Macedonian, Dutch or Spanish, are used to orient towards a range of identity positions that are accessible in the specific encounters and that are made relevant in interaction during processes of 'relational categorization' in which students negotiate their identity positions in relation to the local spaces from which they access the virtual classroom.

The second part of Study II focuses on the analysis of a recurrent theme in the data, namely students' movements in and out of the virtual classroom to attend to issues that claimed students' attention in their physical locations. Such moments of disappearance from the online space, directly into the realm of their homes or other spaces, give rise to a process of hybridization of contexts wherein the boundary-crossing between the global (the online environment) and the local (participants' physical settings) is a crucial component. In this study, we develop the notion of the mobile learner, with a focus on the potential of the virtual classroom to be accessed from anywhere with an internet connection. This creates the paradox of the mobile learner, who does not need to move from his/her home in order to participate in online courses, like the ones focused upon in this study. This identity position is thus both experienced by participants in their ways-with-words as well as afforded by the relation between the 'spaceless' nature of the online environment and the local space(s) from which participants access the virtual classroom.

The analysis of the everyday languaging focused upon in this study has made processes of (im)mobilities or alternative migrations visible in the intricate use of language varieties and modalities available in the online environment. The referential context of the participants becomes, at times, the protagonist in the interaction and allows the students to make sense of their curtailed access to their fellow students, the teacher, and one another.

er's physical surroundings. It is when such partiality is oriented towards by participants, be it in relation to the languaging or the shared spaces of the online environment, that shifts in participation trajectories occur. Such shifts, we argue, and the unexpectedness (Pennycook, 2012) of the turns that the conversation may take as they occur, can be understood as the loci of learning.

The analysis carried out in Study II also point towards the need of an analytical and transcription tool that illustrates more efficiently the chaining between modes and the ways in which parallel conversations unfold at the boundaries of different modes and spaces, both online and offline. This is one of the interests that guided us in the process of data selection and analysis for the next study in the thesis, Study III.

Study III: Mapping languaging in digital spaces. Literacy practices at borderlands

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Study III develops the findings from Study I and II further, with a focus on the space(s) that get(s) created in virtual learning sites. The empirically pushed sociocultural-dialogical analysis of recorded sessions from the third term of study in the online language course focused upon in the CINLE project enables an understanding of how languaging, including the written word, shapes the interactional order in digitally-mediated learning settings in terms of affordances, but also constraints for the participants. In Study III the theoretical issues regarding a shift in the analytical focus from communities to spaces, also discussed in Chapter 3, is investigated further; here an epistemology of TimeSpace in which the two dimensions are inextricably chained is privileged. Moreover, these two aspects of the world are considered in their doing: as with the term *languaging*, time and space also become verbs, timing and spacing. This means, we argue, to acknowledge a socially constructed ontology of human communication, in which time and space (or TimeSpace) are constitutive dimensions that shape, but that also are shaped-in-the-doing by communication (see also Chapter 3 above).

The analysis in Study III focuses on such complexities in the study of the interactional order in online educational sessions that are teacher-led in the Italian for Beginners III (Ita III) data set. The encounters are analytically framed in terms of different phases: an introduction phase, a language and grammar phase, a discussion phase and a concluding phase. Furthermore, following previous classroom research, mapping the interactional order in the data has given rise to five different types of global lesson patterns:

1. plenary lessons (which are teacher-led);
2. written-oral-based work lessons (when the teacher is in plenary mode orally during a grammar lesson phase and some students communicate in the chat tool);
3. oral-written-based work lessons (when students perform their contributions orally without oral feedback from the teacher, who, like other students who do not have the oral floor, communicates in the chat tool);

4. Mixed cyclical lessons (plenary and individual/group work);
5. Group-dispersed settings lessons (group work).

Table 4: Overview of lesson phases and typologies in the Ita III data set (Study III).

Time:	5-10 min	15-30 min	15-30 min	5-10 min
Space:	Phase 1 - Introduction	Phase 2 – Language and Grammar	Phase 3 - Discussion	Phase 4 - Conclusion
Typology	Plenary T-initiated	Written-oral-based work lesson T-initiated	Oral-written based work lesson Group dispersed settings lesson Stud-initiated	Conclusion T-initiated
Participants	1 T; 8-10 Stud	1 T; 8-10 Stud	1 T; 8-10 Stud; sub-groups of 2-3 stud	1 T; 8-10 Stud
Mediating tools employed	T: Mic/CT Stud: CT/Mic	T: Mic/WB Stud: CT	T: CT/NT Stud: Mic/CT	T: Mic Stud: CT/Mic
Literacy tools	CT/WB	CT/WB	CT/offline notes	CT/WB

Key: T: teacher; Stud: student; Mic: microphone; CT: chat tool; WB: whiteboard; NT: Notes tool

Table 4 illustrates the relationship between the different phases in the meeting, the lesson typologies, and participants' communication through the use of a range of mediating tools, including literacy. The analysis highlights the ways in which the meetings are shaped in terms of the TimeSpace dimension. The different phases constitute spaces in which the interactional order is characterized by specific routines, or ways of handling the course materials, as well as the institutionally framed agenda of the course of learning a specific content within the fixed time-frame of 15 weeks of part-time studies.

The second part of Study III revisits the discussion phase of this data set in further detail, highlighting the routine ways-of-being-with-words or the interactional order that characterizes this phase. The discussion phase constitutes spaces during the meetings where a shift in focus transpires, from the teacher's instructions about metalinguistic issues in the oral

mode, to the students' contributions in the oral mode (and the teacher clearly shifting to a written mode). Thus, this phase has been selected to exemplify a transition space from a teacher-centred to a student-centred interactional order. The data set has been augmented with hand-written notes from one of the students. This unique access to participants' analogue literacy practice 'outside' the virtual classroom and the analytical vantage point we have had in our previous work in Study I and Study II has allowed us to see how this kind of analytical aperture can contribute towards an understanding of meaning-making in virtual learning sites like the one focused upon in this project.

The analysis further shows how such processes of TimeSpace shapes the interactional order of the participants in and across a range of literacy practices. Literacy here is framed in terms of accessing the environment through variants of the target language where specific communicative projects are deployed during each phase. Furthermore, the analysis illustrates the indexical order of the interaction, including silence, in terms of the outcome of the institutional spaces in the digitally-mediated settings, where the learning space is endowed with a set of norms and rules that are not transparent for the participants and may thus be considered as constraining.

Study IV: Learning analytics to visually represent the mobility of learners-in-interaction-with-tools in the language-focused virtual classroom: a multivocal approach

Giulia Messina Dahlberg

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In Study IV I am interested in understanding the ways in which social interaction in technology-mediated institutional settings are constrained and afforded by what Pennycook defines as ‘critical moments’ in the educational experience. As online learning is becoming more and more a part of our everyday lives (at least in the global North), we are endowed with the possibility of engaging in communication everywhere we go and with whomever we wish to, without worrying about logistical issues. Students engaging in an online language course, like the one focused on in the present study (an Italian for Beginners online course offered by a Swedish university), do not need to physically commute to the location of the institution providing the course. In the virtual space of the online course, there is no common locality beyond the pieces of local spaces that individuals can enter. Such disrupted space(s) is what frames (in terms of constraints and affordances) participation and learning in online communities.

Participants in the data set focused upon in Study IV have access to a range of semiotic resources and literacy practices; e.g., microphone, webcam image, chat-tool and an interactive whiteboard. From an online perspective, it is neither interesting nor fruitful to see the semiotic and the technological dimensions of learning as separate entities or as a fusion of the two. Sharples et al. argue instead for “a continual dynamic in which the technological and the semiotic can be moved together and apart, creating the engine that drives forward the analysis of mobile learning” (2005: 7).

The concept of social learning analytics (SLA), as developed by Buckingham Shum and Ferguson (2012), is a subset of learning analytics (LA) that focuses the study of learning in the doing, i.e., group processes and the co-construction of knowledge. According to Buckingham Shum and Ferguson, SLA “should render learning processes visible and actionable at different scales: from national and international networks to small groups and individual learners” (2012: 5). Study IV critically discusses how a multivocal approach to the study of synchronous technology-mediated

communication (TMC) in the language-focused classroom can be used to inform the analytics that allow us to 'see' how the micro and macro scales of analysis inform one another in the study of online learning in social (online) settings. This enables an empirically accountable representation as well as an analytic interpretation of the movement of people, concepts and ideas, and how such movement opens up for the possibility of reaching a deeper understanding of how and why learning opportunities (as critical moments, see Pennycook, 2012) occur in the kinds of virtual encounters examined in this study. This, however, is not an easy endeavour and requires joint efforts from a variety of disciplines. Study IV is a first attempt in applying and adjusting a multivocal approach to the study of SCMC in the language-focused virtual classroom.

Thus, the overarching aim of this exploratory paper is to provide some first insights towards the ways in which several analytical scales in the study of SCMC can be bridged by using a multivocal approach. An attempt to develop such a methodology is the response to the following analytical needs: i) scaling up the analysis of technology-mediated action at a micro-scale to larger data sets so that it can be used to support learning analytics and ii) mapping the sociocultural continuum between agents and their mediational means in order to explore where and how learning opportunities emerge in the language-focused virtual classroom, in terms of the kind of social and cognitive aspects that are enacted through the use of CMC.

The preliminary findings presented in the paper describe how an adaptation of the multivocal approach presented in Suthers et al. (2010, 2011, 2013) and in Balacheff and Lund (2013) can be framed in order to attend to data analysis at different scales of the mobility of the learner-in-concert-with-tools. Taking discourse and its sequentiality as a starting point and as a unit of analysis, I forefront dialogue in order to shape learning analytics that capture moments of shifts in focus, or critical moments.

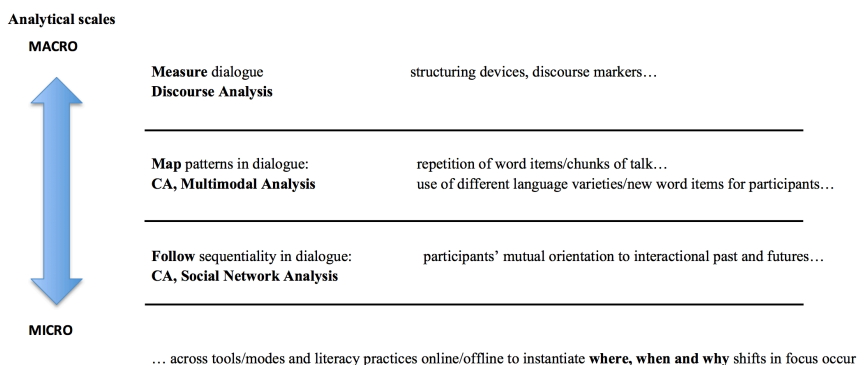


Figure 13: Multivocal analysis of online dialogue (Study IV).

Figure 13 illustrates an attempt to detect the relevant analytical scales that provide a level of depth in the analysis that supports a visual representation of online dialogue. A multivocal analysis takes into account and shows the contingencies across scales, modalities and language varieties as well as the tools used by participants in the online/offline settings. The analysis at the micro-scale shows how the unexpected turns that emerge in interaction can be understood as driving the dialogue forward, and it is, therefore, of great interest to map and study them using analytics. In addition, a further dimension pertaining to language use needs to be addressed here, which is participants' manipulation of word items and chunks related to tasks in the course materials as well as in the course curriculum more broadly.

The implementation of a multivocal approach to the creation of a more holistic analysis of online (synchronous) group interaction means providing an interpretation of the data which is in dialogue with other interpretations. This is done in order to reach the goal of the creation of alternative theoretical and methodological understandings of the field as well as of the data which can then be generalized and used as a method for reliably distinguishing 'critical moments' from 'non-critical moments'. In this paper, I take a first step in a discussion of how a particular multivocal approach can attend to the mobility of the learner as well as to analytical scale jumps in the data. This discussion provides important insights into emergent mobile sociologies of education (Landri & Neumann, 2014)

which, I argue, shape and are shaped by alternative pathways of participation in environments that are not defined by time or spatial dimensions such as walls, a ceiling or a floor.

Overarching conclusions: epistemologies of TimeSpace in virtual learning sites

This concluding section further discusses the results of the studies in relation to the overarching aim and issues in this thesis. The research agenda of the thesis aimed at reaching a deeper understanding of the communicative strategies in SCMC as well as the interactional patterns afforded and constrained by the institutionally framed agenda of the online course. The thesis also aims at accounting for participants' subject positionings in the micro-scales of interaction. All three foci, it is suggested, shed light on the learning opportunities that are co-created in interaction in SCMC. In other words, the analysis of the online encounters provided in the four studies, explore the ways in which teachers and students negotiate their positions at the boundaries of different communities. In addition, studying languaging in virtual learning sites has implied examining the affordances and the constraints of the technology in use. The netnographic explorations in the four studies included in this thesis illustrate ways in which participants in different spaces and different communities reach mutual engagement and negotiation of meaning in order to accomplish the institutionally framed agenda of the course *as well as* a range of different social goals. These findings, I argue, have important repercussions for what it means to understand and theorise the tensions and contradictions of online learning *and* education in the 21st century in terms of, as suggested in the Introduction, education open for all, anywhere and anytime. This section is an attempt to synthesize how studies I-IV have addressed these issues as they are framed in Part 1 of the thesis.

Mapping communicative strategies and interactional patterns: hybridity, fluidity and (im)mobilities in virtual learning sites

The analysis of the talk-in-interaction at the micro-scale highlights the hybridity and fluidity of communication in virtual learning sites in a range of different ways: *firstly*, the languaging is plurifaceted insofar as participants topicalize different parts of the discourse and orient towards a variety of identity positions (e.g., novice, expert, learner on-the-move). This is made relevant in relation to two specific scales of understanding: one is

the meta-level discourse which participants use to ‘progress’ in their awareness of the language variety they are learning, which legitimizes their membership in these spaces. Another aspect of this is how such hybrid languaging bears messages which participants orient towards as relevant and meaningful, regardless of the appropriateness of the outcome (see also Seedhouse, 2004). *Secondly*, the analysis demonstrates that access to artefacts that are not directly visible to participants expands the possibility of representing and making sense of what transpires among the individuals who indeed have limited visual access to one another’s bodies and artefacts in their physical spaces. This second aspect erases the boundaries of what is here and there, online and offline (see also Jenks & Firth, 2013; Lamy, 2012; Lamy & Hampel, 2007).

The analysis also highlights the fluidity and hybridity of communication *as well as* of semiotic resources and repertoires: participants draw upon different means in order to make sense of the interaction going on here (their physical spaces) and there (their shared online spaces) (see also Liddicoat, 2011). The analysis shows, however, that such issues of sharing spaces are problematic in the kinds of institutionally framed interactions that the excerpts in studies I-IV illustrate. The students share the digitally mediated spaces of the virtual classroom, but also a range of materials that frame their choices of what to talk about, which is partially curtailed in the virtual environment. Students orient towards the course materials using media that are not transparent to the participants or for us as analysts. We, thus, can only (re)create such shared spaces in the ethnographic processes of data creation and representation. However, the institutional frames of the online course are present inside the virtual classroom, and they both shape and get shaped in a mutual movement between the offline/online world, the institutional/private, and the virtual/real. The analysis of the empirical data suggests further that language varieties used in virtual learning sites can be understood in terms of what Pennycook calls complex “mobile resources” (2012: 27) and the increasing attention that is being paid to the fluidity in languaging across modes, time and space (Bagga-Gupta, 2013). Attending to the fallacy of thinking in terms of fieldwork in static geopolitical-linguistic spaces and communities, the results highlight the need to focus on the distributed-situated and the discursive-technological constitution of participants’ worlds; i.e., humans-in-concert-with-artefacts (Bagga-Gupta, 2014b) in the shared space(s) of the virtual classroom (Study IV).

In the online glocal space of the virtual classroom, temporal-spatial indexicals like *now*, *then* and *here* are relevant in the interaction and become proxies that frame the TimeSpace fractured dimensions through the physical locations of the participants (Study II). Thus, ontological/essentialistic dichotomisations of language, culture and identity do not lead to finely tuned understandings of what is going on in terms of knowledge sharing and co-construction among individuals because, as the analysis presented in studies I, II and III shows, individuals continue to shape their positionings towards one another using frames that are not different from an idealised face-to-face encounter in which participants are supposed to have an unveiled access to context. Affordances or constraints to mutual understandings are related to the types of identity positions that participants are granted and actively take part in situ, in the embodied TimeSpace dimension of the online encounter, irrespective of its curtailed or mediated aspects.

Finally, the focus that participants have on the co-construction in interaction of the spaces of the virtual classroom that has emerged from the analysis of the online encounters illustrates the ways in which human beings, when deprived of visual cues to understand the environment(s) that they are situated in, compensate by topicalizing the space(s) of the interaction in talk. While this is obvious when it comes to time (we need to rely on external tools to make sense of time dimensions), space is something that we negotiate through gaze more than talk or other semiotic resources outside our bodies. Online spaces are not obvious or visible, and thus they need to be negotiated by externalised processes like talk. Students' oral topicalizations of what happens in the written mode to make it 'visible' to the group are examples of how space is negotiated in an environment like Adobe Connect, where a limited visual access to participants prevents them from, for example, focusing their attention towards a specific area in the environment by physically pointing towards it. The analysis across space and time carried out in the four studies that are included in this thesis contributes towards understanding how participants in online virtual sites, like the one focused upon here, manage this negotiation of time and space through languaging.

Identity positions as movement across modes, language varieties and dimensions of TimeSpace

A central epistemological position in this thesis is that language and identity are by-products of communication. Thus, understanding how these are

made into being *in dialogue* (see Garcia 2010; Wenger, 1998) has been an important issue in the four studies that constitute this thesis, which is also reflected in question C about the ways in which participants' subject positioning becomes salient at the micro scales of interaction. More specifically, studies I and II focus on such issues in relation to the affordances and constraints of the discursive-technological tools used during the virtual encounters. This is explicated in terms of a mutual interdependence between the use of particular semiotic resources, including modalities and language varieties, and the ways in which participants' identity positions are shaped in interaction. The empirical analysis carried out in studies I and II illustrates how the different modes and spaces of interaction are related to participants' positioning as more or less experienced peers and how this process transpires in a fluid and flexible manner throughout the encounters. While it is at times one student who takes the floor (oral or written) and leads the interactional sequence further, only some minutes after, the same student takes and is granted the position of novice (which we have, drawing on Heritage [2012], referred to in Study III as the 'epistemic engine of the conversation'). Furthermore, the students are framed in terms of *transmigrant*, or *transnational people*, i.e., individuals who often cross geopolitical borders to attend to social practices among other people who may or may not be as mobile (Study II). This does not mean that all students who take advantage of an online course because of the flexibility in time and space that it affords have the opportunities to be on the go while accessing higher educational content. However, the identity position of an online student as mobile and transnational provides opportunities to join the virtual classroom as well as gain access to learning materials and receive assessments that are institutionalised (students get university credits after completion of the course) and ready to use, without getting entangled in logistical issues (see also Messina Dahlberg & Bagga-Gupta, 2015). Furthermore, students' geopolitical locations as well as their situation in terms of aspects like jobs and interests in life are topicalized in conversation, *along with* students' attempts at communicating in a language variety with which they have limited experience. Identity positions, in this line of thought, are closely related to patterns of participation (Wenger, 1998). What is characteristic of communication and membership in this kind of virtual site is that such trajectories (both of identification and participation) are chained to the use of specific semiotic tools which, in these spaces, allow for the existence of a variety of conversational floors that can be publically accessed by all participants *simultaneously*. Such

floors, in turn, enable a variety of identity positions inside the virtual classroom and alternative affordances for inclusion in the encounter. The analysis in studies I, II and III also highlights the ways in which processes of boundary-crossing (between participants' physical locations and the global spaces of the virtual classroom) are significant in terms of i) identity positionings, ii) participation trajectories and iii) learning opportunities.

One of the main contributions of the research presented in this thesis is that it contributes to a deeper understanding of how the three dimensions outlined above are not independent of one another and cannot be treated separately; they are all constitutive parts of a fluid, hybridized and borderless space, which I refer to as a 'permeable space'. I outline this in further detail in the next discussion section below.

While conceptualizations of identity and participation as constitutive dimensions of learning is far from new in educational research, the contribution of this thesis lies in the analytical exploration of the *connections* as well as the *spaces* that open up learning opportunities in virtual sites. Furthermore, the analytical descriptive endeavour that has been undertaken here contributes to the field of SCMC from an interactional perspective. The individual studies and Part 1 of this thesis account for the movement of people, tools and ideas across a variety of modalities and language varieties. In addition, issues of openness and inclusion are related in interaction to the extent that participants are able *to use* as well as *to notice* when others use the written word in the virtual environment. The existence of parallel conversational floors does not automatically mean that all voices are heard without requiring explicit actions on the students' part to bring attention to instances when the use of different modes simultaneously is not attended to in interaction (see Study III for specific examples of this phenomenon).

A multitude (and simultaneous use) of voices, in other words, means both that the communicative situation can be enriched and nurtured, and also that this may pass unnoticed because the participants are not yet trained to 'see' and attend to parallel conversational floors. These voices are also *culturally shaped* (in relation to the modes and language varieties through which they are mediated) and have different currency according to *when*, *by whom* and *why* they are performed in relation to the institutionally framed agendas of the course. The multi-scale analysis accounted for in Study III illustrates the ways in which languaging (in terms of the use of a range of discursive-technological tools) is organised in relation to the TimeSpace dimensions of the online encounters. Specific tools (like the

whiteboard or the chat tool) are more likely to be used by students and/or the teacher during specific moments of the encounters (which we refer to as ‘phases’ in studies I and III). This applies also to the kinds of patterns of activities that unfold during such encounters. I argue that understanding why certain patterns arise at specific moments is decisive for understanding socialization processes in the virtual classroom as well as how such processes can open up for alternative patterns of manipulation of content and learning.

The analyses in studies III and IV further illustrate two dimensions of how notions of movement and mobility are related to identity issues: on the one hand, participants negotiate their rights as members of online glocal spaces of the virtual classroom across the boundaries of different geopolitical locations; on the other hand, mobility is framed in terms of the manipulation of offline-online information and artefacts in the virtual collaborative setting. Participating in distance, online education means learning to manage this mobility in order to orientate in an environment which is not defined by walls, a ceiling or a floor. And yet, as in any other space, institutional or private, it is what participants *do* with the resources they have at hand that defines the connections that are made among humans-in-concert-with-tools in terms of how relevant they are for the individuals involved and thus what types of learning experiences students can take along with them, in their extracurricular lives.

Learning opportunities at the boundaries

The empirical analyses carried out in the four studies presented in this thesis have illuminated the learning dimensions in the spaces of the virtual classroom both with regards to new semantic units of the ‘object’ (Italian) but also in relationship to how the movement of tools, artefacts and bodies can be interpreted and followed when what participants share is a screen image in the digital device they deploy and that mediates their communicative endeavours.

Students and teachers have the potential to attend these courses from any physical location with an internet connection. This implies an interesting phenomenon, which we have called the paradox of the mobile learner (Study II). Participants can be on the move between different locations and still make it to their weekly Italian class, but they can also choose not be mobile at all, remaining at home when attending the online course. However, in Study III we show that the concept of mobility also refers to the use of tools and inscriptions, through processes of reification, in and

across the digitally mediated setting of the virtual classroom. Furthermore in Study II, we extend the notion of mobility in and across languaging as a i) communicative mode, and ii) as a meta-cognitive tool (see also Seedhouse, 2004; 2009) to *talk about* the use of an idealised language (in this case Italian). The tension that derives from such a movement has several implications for the ways in which communication evolves and on the interactional patterns that are co-created across online-offline glocal settings. Language varieties are chained in the interaction but are at times kept apart by the students in order to make sense of the situated talk. Some language varieties (e.g. Spanish) are used as a proxy to convey meaning and move the interaction forward. The use of a rather wide spectrum of varieties and repertoires expands from the Ita I to the Ita III data set. In the latter, students use the language variety Italian more consistently to perform institutionally framed tasks.

Accounting for the repertoires of language varieties used during the online encounters has also been an analytical challenge. While our interest lies in understanding the *doing* of language not in terms of discrete systems but rather on their usage, we had to develop specific representational techniques that indeed relied upon the same discrete categories we aimed at problematizing. However, it is important to highlight here that in line with Bagga-Gupta (2013), evoking the use of certain language varieties for heuristic purposes is a communicative endeavour that lies within the aim of scholarly writing. This does not have to be in contrast with the epistemological assumptions through which we consider languaging and identity positioning in both their fluidity and their concrete flavour in analytical terms. The boundaries between the local and the global and the online and the offline worlds of the participants in the virtual site become diffuse, creating the need for well-defined categories in the analysis (Study III). Participants' physical locations, where they are at the moment of the online meeting, which language varieties they draw upon, including orientations towards their nationalities, become important features in conversation and in the co-construction of participants' identity positions in the online glocal sites of the virtual classrooms (studies II & III).

The online language classroom does not have characteristics that are different from the physical classroom per se; these are negotiated inside the classroom community and have implications for how the different constellations of participants are framed within the situated activity as well as in the accounting of learning of how, what and when inside the (virtual) classroom (studies III & IV). The video-conferencing program in

which students meet to communicate synchronously can, in this perspective, be conceptualized in terms of an environment which offers a set of affordances for the participants. However, all participants do not use these affordances in the same way; sometimes they are not seen as affordances at all, but rather as obstacles or constraints. The chat window in the environment is one example of such an affordance. The web-cam is another. These could be used by participants to make meaning, but they are used differently and with different purposes: as a control tool to see who is there in the environment, behind the screen; or to provide “complementary functionality” (Clark, 2003: 110) to augment the oral floor; e.g., using the written medium in the chat window (see studies I & II). We show in Study III how students tend to perform the task at hand in ways that are rather monologizing. Access to one student’s handwritten notes has made possible the analysis of how the written word (in this case not accessible to the other participants in the encounter) shapes other modes in ways that can constrain the interaction. Indeed the presentation of analysis of everyday interactions in Study III shows that as soon as a student directs questions to another student performing his/her task, the latter stops being trapped in the script (of the homework), thus leaving space and time for an alternative interactional order in which spontaneous talk is more likely to occur. We argue, in Study III, that the epistemic engine of conversation is ignited when participants in the conversation are not in epistemic balance. In turn, such an imbalance (and indeed mobility) is what creates the potential for the availability of new information (in the form of new word items and knowledge about the conversational partner) that are relevant in the communication situation, beyond the institutional frame that permeates the encounters (see also Heritage, 2012). However, I do not wish to make normative claims about what is ‘good’ or ‘authentic’ dialogue in the language-focused classroom in SCMC. This thesis takes a critical stand towards applied approaches to dialogue and SCMC by scrutinising interaction in the nitty-gritty of everyday encounters and meaning-making among people. This is in line with more recent ideas about a mobility turn in educational research (Leandri & Neumann, 2014: 2) that encompasses alternative ways of (re)presenting the performativity of learning as economically, symbolically, and materially produced and reproduced by looking ‘in the middle of things’ and perhaps, I also argue, with even more analytical attention, at the boundaries. This thesis, and more specifically the contribution of Study IV, attempts to follow this line of inquiry and provides some suggestions as to how this can be done using

analytical and representational techniques that allow researchers to map and visualise the movement of language varieties, tools, people and ideas across time and space.

Concluding reflections: the virtual classroom is a permeable space

To conclude, the results highlight, in line with the approach on literacies in Thomas et al. 2007 and Leander et al. 2012, the virtual classroom is not a hermetically sealed room (nor is a physical classroom, for that matter), but rather it is surrounded by a membrane (be it the computer screen or physical walls) which is highly permeable and allows stuff (information, tools, practices) to get in and out. What has emerged in the analysis of the empirical data is this seeping in and out of information, people, tools and ideas across virtual and ‘real’ spaces. In addition, the analysis shows how this movement across boundaries both opens up the unexpected in ways that could pedagogically be framed in terms of ‘fruitful’ for the learning experiences of the individuals, but also distracting in terms of the creation of expectations that were not fulfilled by the participants in the encounter. Pennycook’s idea of critical moments (2012) (presented in Study IV) and Li Wei’s concept of translinguaging space (2011) acknowledge the centrality of the ‘moments’ in which “the spontaneous actions or events that have specific indexical value to the individual and significant impact on subsequent development of actions and events” (Li Wei, 2011: 1234). However, the analytical toolkit and the epistemological positions offered by the amplified CA used in studies I, II and III do not have the ability to elucidate how individuals make use of new information, tools and ideas in other situations, outside of the spaces in which the encounter (of which the analysis is a re-construction from a range of epistemological positions and tools) has transpired. There have been attempts in this direction (see e.g. Rajala et al., in press; Brown et al. 2013), by ethnographic research that follows people across institutions and private spheres, like school and home. What netnography affords educational research today is the ability to map individuals’ digital contributions to locate the movement of information and ideas across time and space to create data sets that can be very large, encompassing a wide range of spaces and activities. Such access to information (in terms of so-called ‘big data’) is the analytical centre in the fields of educational data mining and learning analytics. Here, the digital traces that students leave behind are used in the analysis in order to study ‘learning in the doing’. According to Buckingham Shum and Ferguson,

these kinds of analyses “should render learning processes visible and actionable at different scales: from national and international networks to small groups and individual learners” (2012: 5). The data set focused upon in this thesis encompasses two terms of study and includes the course material and other artefacts used by participants. It was not created with the aim of generating a large corpus, and yet in its later stages the analysis suggested that the result of the ethnographic miniatures provided in the four studies could inform a methodological discussion on the possibilities offered by netnography, CA, and multimodal and discourse analysis for the study of online learning. Such a multivocal approach, it is suggested, handles the use of netnographic methods in the kind of multivocal analysis of which Study IV is only an example. The next question that studies like the ones included in this thesis may answer, and that is relevant to ask at this stage, is what it means to incorporate analytics and big data as a part of a philosophy of education. Analytics always entail some kind of preparation of data for further analysis. This, in turn, means that issues of standards, quality and globalization are at stake now more than ever. If “our analytics are our pedagogy” (Knight et al., 2014: 31), what kind of analytics should be designed and used in educational research? I argue that, in order to address this issue, empirically grounded research at the micro scale of analysis, like the one carried out in the studies included in this thesis, is needed in order to understand the ways in which interaction may support collaboration and learning. As Suthers and Rosen succinctly put it: “the network structure is not enough: to explain the origin of social life we must understand the nature of the communication or interaction that takes place” (2011: 17). The studies in this thesis illustrate how the organization of time and space in digitally mediated interaction in specific virtual learning sites both affords and constrains the emergence of critical moments in which participants experience a shift in focus that, in turn, may end up in an encounter with new knowledge and a re-organization of the flow of the interaction. These moments have a bearing on how students and teachers in the data sets included in the four studies position themselves towards one another, e.g., as novices or more experienced peers. These positions continuously shift in interaction, and this is also an aspect in which CA and a multimodal approach have been fruitful in terms of providing a robust description of the kind(s) of languaging that transpires in virtual learning sites. Thus, the analytically descriptive endeavour of the research presented here contributes to: i) the field of netnography by showing how different dimensions of the online

TimeSpace flux can be accessed; ii) the field of social learning analytics by showing how fine-grained analysis could inform an understanding of the emergence of processes of learning at different scales; and finally, iii) the field of language (online) studies, by questioning the assumptions of “one language-one nation-one geopolitical space”, in favour of a *mobile learner* identity that can, it is suggested, be more easily accessible in the kinds of virtual learning sites like the one examined in this thesis.

Thesis implications and future research: an epilogue

One main concern in this thesis has been to potentially engage language educators as well as language learners across different educational systems in a discussion about communication and online learning, and on the importance of these precious moments in which students and teachers can share a slice of their lives to accomplish the common endeavour of learning a language variety with which they have limited experience. This thesis (i.e. both parts 1 & 2) has shown that, in fact, while the students meet with an educational agenda as the starting point, this does not prevent them from asking questions about one another, where they are, the place they live in, what they do and why.

The research that constitutes this thesis cannot answer questions about students’ improvements in the language variety they are attempting to learn. It cannot answer questions regarding the quality of the dialogue they engage in during the encounters. Thus, providing pedagogical support in the development of best practices in online language education seems a goal that is out of reach and answers to which I neither engage in nor try to speculate upon in the last few pages of Part 1. However, the studies may be read by both educators and learners in order to learn more about the affordances and constraints of video-conferencing programs like Adobe Connect. Furthermore, what I can provide from an analytical perspective that may have implications for the design and planning of online courses is a careful mapping of how participants use specific tools and resources to make meaning in virtual classrooms. The studies presented in this thesis also provide important insights into how participants engage in the kind of social learning I have outlined in Part 1 of this thesis. An attempt to understand and unravel the complexities of online glocal communities with participants who are at the boundaries of a range of physical and virtual sites has been made in all the four studies included in this thesis. I also hope that the kind of critical approaches to language learning, especially in virtual learning sites, can contribute towards further

insights in terms of a higher reflexivity in research and also when planning educational activities that aim to foster language learning or the so-called ‘cross-cultural competencies’ of individuals.

Further steps are already being made in this direction by members of the CINLE project: a new study has been recently published (Messina Dahlberg & Bagga-Gupta, 2015) on the theme of mobility and virtual learning sites as a Third Space from a decolonial perspective. An international conference is being organized by the CCD research environment where project CINLE is based upon the theme of ‘Virtual learning sites as languaging spaces’ (ViLS-2)⁴⁶ and a special issue in an international journal on the same theme is currently in the pipeline. I argue that the kind of research on interaction in and across online spaces like the one presented in this thesis needs to be completed by further studies on how to design netnography projects that will better take into account the mobility of resources of which we only have seen a glimpse in the four studies presented here. Furthermore, the study of how access to video affects situated interaction in virtual learning sites is in need of further scrutiny. I also argue that from a multimodal perspective, the study of how and with what consequences literacy practices which participants engage with enter the permeable membrane of the virtual classroom is a path that I am interested in taking for more ethnographic and analytical journeys in the future.

To conclude, how did this thesis affect me, and my view of online encounters among students? In the introduction I started by saying that the online synchronous meetings and how they were managed by the individuals that participated in them have been a source of fascination for me since my first hours as a language teacher in online courses. The enthusiasm and perseverance with which students and teachers (myself included) manage to hold the meetings together in spite of technical issues, sentences only half-heard, and the sometimes uncooperative internet connection, inspired me to know more about how the meetings and the dialogues as they unfolded and thus to engage with the research which has been presented in this thesis. Now that the thesis is finished, and I have the luxury to be able to seriously think about new projects. I wish to know more and search deeper in the intricate forest of human communication.

⁴⁶ For a description of the ViLS-2 international conference, see www.oru.se/CCD/ViLS2

List of abbreviations

AoIR	Association of Internet Research
CA	Conversation Analysis
CALL	Computer Assisted Language Learning
CCD	Communication, Culture and Diversity
CINLE	Studies of everyday Communication and Identity processes in Netbased Learning Environments
CMC	Computer-Mediated Communication
CoP	Community of Practice
DUKOM	Distansutbildningskommitté [Committee for Distance Education]
EM	Ethnometodology
L1	Language one
L2	Language two
LMS	Learning Management System
ODT	Open and Distant Teaching
SLA	Second Language Acquisition
SLA	Social Learning Analytics
SCMC	Synchronous Computer-Mediated Communication
ViLS	Virtual Learning Sites

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Appendix – Project CINLE description

CINLE – Studies of everyday communication and identity processes in netbased learning environments

This research conducted within project CINLE lies at the intersection of sociocultural theoretical points of departure, postcolonial theory and research conducted within the fields of identity and communication broadly. Our work deals with issues of languaging in virtual multimodal environments as well as the making of identity and negotiation of meaning in these settings. The empirical focus in project CINLE is on situated practice: what people do in contraposition to the study of how people talk about their activity.

- What are the ways in which students engage in language learning?
- What are the interactional patterns in virtual institutional settings?
- What communicative strategies are employed by students and teachers?
- How are institutional activities negotiated within the constraints and opportunities accorded in virtual multimodal & multilingual settings?
- How are identities negotiated and (co)constructed by participants' ways-with-words?
- What are the ways in which participants subject positioning become salient in micro-level interaction in virtual settings?

These are some of the research questions that are posed in the empirically pushed CINLE project "Communication and identity processes in net-based learning environments - Language learning over the boundaries of time and space". This research project originates in the attempt to investigate and reach a deeper understanding of the communication that occurs in virtual institutional settings in higher education. Here, participants in online courses can come together in virtual sites from everywhere on the planet, as long as they have access to an internet connection and digital technology. We contend that notions like learning, identity, context, borderlands, hybridity, ubiquity, mobility, transnationalism, diaspora, multilingualism and multimodality need to be understood in relation to a shift in focus where the objects of inquiry are communities of practice in online glocal nexus which allow flexibility in that the boundaries of time and space can become diffuse.

The project presents new perspectives on issues based upon completed and ongoing work within the research group CCD, Communication, Culture and Diversity, at the School of Humanities, Education and Social Sciences (HumEs) at Örebro University and the research school in Technology-Mediated Knowledge Processes in the university and in professional life, at the School of Languages and Media Studies at Dalarna University.

Project CINLE aims to contribute towards an understanding of the complexity of students' interaction and their activity of languaging in online synchronous environments from empirically pushed theoretical framing. The results of the project will, it is suggested, be of interest for teacher education and for the development of best practices in language learning in computer-mediated communication situations.

Project CINLE is ongoing until 2015 and its members are:

- 1) Giulia Messina Dahlberg, (a) doctoral candidate in education, School of Humanities, Education and Social Sciences, Örebro University; Research school Technology-mediated knowledge processes in the university and in professional life, Dalarna University; (b) Lecturer in Italian, School of Languages and Media Studies, Dalarna University;
- 2) Sangeeta Bagga-Gupta, (a) professor in education & didactics, School of Humanities, Education and Social Sciences, Örebro University; (b) research leader, Centre for Rehabilitation Research, Örebro University Hospital;
- 3) Mats Tegmark, (a) Senior Lecturer in English, (b) head of development for teacher education and adjunct head of School of Education and Humanities, Dalarna University.
- 4) Sylvi Vigmo (a) Senior Lecturer in Education; (b) Director of Studies for the LinCS-DSES Doctoral School in Educational Sciences

Project CINLE international peer-reviewed publications

Messina Dahlberg, G & Bagga-Gupta, S (2014) Understanding glocal learning spaces. An empirical study of languaging and transmigrant positions in the virtual classroom. Special theme issue "Media and migration: learning in a globalized world". *Learning, Media and Technology* 39(4), 468-487. <http://dx.doi.org/10.1080/17439884.2014.931868>

- Messina Dahlberg, G., & Bagga-Gupta, S. (2013) Communication in the virtual classroom in higher education: Language beyond the boundaries of time and space, *Learning, Culture and Social Interaction* 2 (3) 127-142 <http://dx.doi.org/10.1016/j.lcsi.2013.04.003>
- Messina Dahlberg, G. & Bagga-Gupta, S. (in press) Learning on-the-go in institutional telecollaboration. Anthropological perspectives on the boundaries of digital spaces. In *CALICO monograph series on the theme: Re-searching Language Learning Interaction online: from Social Media to MOOCs*.
- Messina Dahlberg, G. (to be submitted). Learning analytics to visually represent the mobility of learners in the language-focused virtual classroom: a multivocal approach. (Study 4)

Project CINLE international peer-reviewed conference presentations

- Messina Dahlberg, G., Lindberg, Y. Virtual sites for sustainable lifelong language learning. Symposium accepted at 17th World Congress of the International Association of Applied Linguistics (AILA) 10 - 15 August 2014, Brisbane, Australia
- Messina Dahlberg, G., & Bagga-Gupta, S., Socialization in transnational epistemic practices: lesson types and representations in virtual classrooms 13th IPrA, International Pragmatics Association Conference. 8-13 September 2013. New Delhi, India.
- Messina Dahlberg, G., & Bagga-Gupta, S., Constraints and affordances in epistemic practices: Socialization in the virtual classroom as an affinity space. SIG 10 Social Interaction and Learning Symposium "Literacies, Language and Learning inside and outside institutional settings" 15th Biennial EARLI, European Association of Research on Learning and Instruction. August 27 – 31 2013. Munich, Germany.
- Messina Dahlberg, Giulia & Bagga-Gupta, Sangeeta. Virtual learning sites as transnational borderlands. Dialogical approaches to participants "multilingual-modal" language. Presentation at Conference Eurocall 2012. Theme Using, Learning, Knowing. Gothenburg University, Sweden 22-25 August 2012.
- Viberg, O., & Messina Dahlberg, G., Who gains the leading position in online interaction? Power shifts in the online synchronous language

classroom – paper accepted in the Next Generation Learning Conference 2012 – Högskolan Dalarna, Falun, Sweden, 21-23 February 2012

Messina Dahlberg, G., “I’m not so good at this”. An analysis of processes of inclusion and marginalization in online institutional virtual environments, across and between boundaries of time and space. Paper presented at the International conference-cum-workshop on Marginalization Processes, Örebro University 17 - 19 October 2011

Messina Dahlberg, G., Linguaging in online higher educational environments. Unimodal multilingual behaviors? Abstract accepted as Round Table during the biannual EARLI 2011 conference “Education for a Global Networked Society in Exeter, England, 30 Aug – 3 Sep 2011

Messina Dahlberg, G., Teaching Italian as a foreign language in the virtual classroom: how do students interact during chat seminars which are not teacher-led? Abstract accepted for oral presentation in the thematic area of “Personalizing learning environments and networking” during the 11th CercleS International Conference (CercleS 2010) in Helsinki, Finland, on 2 - 4 September 2010.

Part 2 - Studies I-IV

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