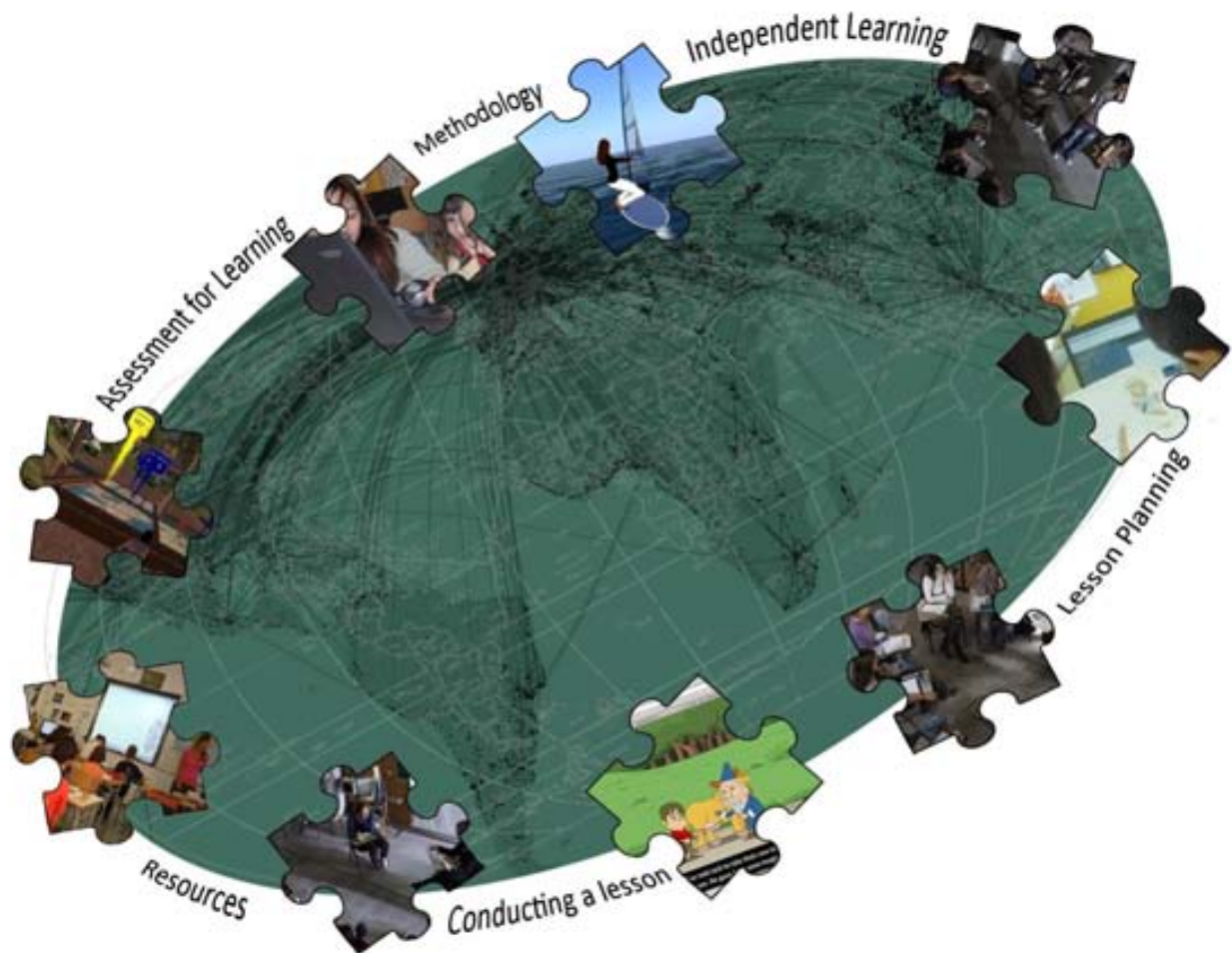


EXPANDING THE SOCIO-MATERIAL SPACES OF TEACHER EDUCATION PROGRAMMES:

A qualitative trace of teacher professionalization through
blended pedagogy in Catalonia

Doctoral dissertation
by Victoria Antoniadou
Supervisor: Dr. Melinda Dooly



Department of Language and Literature Education and Social Science Education
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To Dad, Mum, Olia,
my cherished grandfathers
and 'paxioulakia' who have been a constant inspiration to me

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Ithaca gave you the marvellous journey. Without her you would not have set out.

She has nothing left to give you now. And if you find her poor, Ithaca won't have fooled you.

Wise as you will have become, so full of experience, you will have understood by then what these Ithacas mean

- *Constantinos Kavafis.*

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Abstract

A central issue in current research on teaching and learning is finding ways to make teacher education a more tangible concept in order to respond to the exponentially mounting demands of networking and the interconnected world. This doctoral dissertation examines the affordances of telecollaboration as integrated component in standard teacher education programmes. Primary objectives are to qualitatively explore participation in the blended learning environment and examine the ways in which practicing teachers engaged with the people and resources therein and gradually mastered professional teacher competences.

To this end, a mixed-method approach to data collection and analysis was used. The analysis scrutinizes a variety of ethnographically-collected data to map out the subjective experience of three student-teachers as they engaged with technology-integrated pedagogy. Most salient learning outcomes were quantitatively substantiated and isolated through a screening process and were then analyzed developmentally, using a bricolage of sociocultural and dialogic theoretical lenses. The aim of this latter analytical strategy was to trace knowledge in the making and the cognitive links that were formed between university and virtual participatory settings across time.

The findings empirically demonstrate teacher learning leading development in terms of epistemological, pedagogical and reflective skills in line with formal educational standards. The research concludes with a critical reflection of the relationship between learning as guided process of participation and outcome and discerns pedagogical affordances of this learning model as a powerful mode for quality teacher preparation.

Part I

Opening

A teacher affects eternity; he can never tell where his influence stops.

- Henry Adams

1. Introduction

1.1. Research Overview

The title of this dissertation summarizes the endeavour to illustrate the learning process and outcomes of Initial teacher Education (ITE) that stem from the purposeful expansion of the social (people and relationships) and material spaces (tools and spatial contexts) through network-mediated communication. In turn, it prompts the main argument that such expansion holds optimizing potential for teacher learning and knowledge development in response to current societal and educational demands.

The investigation began with the broad objective to investigate the learning process and outcomes of teacher professionalization, in the context of a practicum¹ course in Barcelona, where aspects of telecollaboration were used. Primary school student-teachers of English as a Foreign Language (EFL henceforth) were ‘connected’ with various agents of Foreign Language (Teacher) Education (henceforth FLtE); namely, educators, class and virtual peers for the purpose of collaboratively designing didactic material for the Foreign Language (FL henceforth) classroom. Specifically, the

¹ Practicum classes have been called by different names in different contexts (e.g. school placement teaching, teaching internship, practice teaching) but in this research, I will refer to it by the name used at the faculty where the study took place.

learning environment combined two modes of learning; offline (university) and online (telecollaboration) as model of pedagogically and technologically integrated teaching practices.

Following the sociocultural framework of collaborative learning, this broad objective was refined into an interest to study the teacher learning process developmentally, in both its socio-emotional and cognitive component (Hogan & Tudge, 1999; Duran & Monereo, 2005). To this end, this research probes the ways in which a deliberately continuous focus on teacher-related content facilitated by network-mediated interaction supported student-teachers to explore, construct, internalize, articulate and integrate professional knowledge, skills, competences, and attitudes.

Accordingly, this research is guided by the following research questions:

1. How does the expanded set of interactions contribute to shaping previous and ongoing school placement experiences into scientific understandings of communication and competence-based FLE?
2. What are the affordances and pedagogical implications of blended learning configurations for quality ITE in the 21st century?

In order to respond to these research questions, ethnographic methods, including participant observation, were used to collect a large array of data both text-based (e.g., diaries and final reflections, virtual chats) and audiovisual (e.g., classroom tutorials and school implementations); which facilitated a longitudinal investigation of the learning process. Second, a tailor-made, yet systematic analysis of the data was conducted using the Grounded Theory (GT henceforth) approach (Auerbach & Silverstein, 2003; Charmaz, 2006). Following the codification, and in line with theoretical and methodological directives, I traced cognitive development across multimodal

‘episodes of cognition’ (Barab, Hay, & Yamagata-Lynch 2001; Barab, Hay, Barnett, & Squire, 2002; Wortham 2006) that took place at different points in time within timeframe of this course. Accordingly, these episodes are defined as developmental processes indicating changing levels of mastery of specific concepts or skills. This strategy serves to materialize the research endeavour to an in-depth sequential examination of the interrelationships between whole-group classroom and small-group virtual interactions; and the afforded learning outcomes. The ethnographic character of this investigation also allows relating the newly developed cognition to previous school and university studies.

1.2. Aims and objectives

The specific objectives of the analysis are therefore to:

1. Examine the dynamics of activity across a blended configuration of interactive environments and trace the emergence and development of new teacher knowledge
2. Discern and evaluate the affordances for learning afforded by the integration of telecollaboration in the traditional mode of teacher training (university instruction and school placement)
3. Discuss the implications of this micro-context for shaping the macro-context of teacher professionalization according to the current standards of FLtE
4. Contribute to a global understanding of the complex relationships that are formed in blended environments and encourage teachers and teacher educators to apply such methodologies in their instruction

1.3. Relevance and validity

The research presented here resonates with the contemporary need for promoting powerful learning processes and bringing about transformative education to tackle the challenges and needs of an increasingly ‘interconnected’ era. Accordingly, the design and implementation of this course assumes the underlying themes of authenticity of setting and practice, promoting analogy between real life work practices and institutionalized education and modelling of technology integrated pedagogy.

On a theoretical level, this research aligns with socioconstructivist and dialogic approaches to learning and development as the mainstream theoretical foundations to investigating and understanding human learning and cognition (Bakhtin, 1981; Vygotsky, 1978;1986) It is particularly concerned with socially-mediated construction of knowledge and engages with the understandings that cognition is situated and distributed across individuals’ experience of social and material environment as the source and foundation of development (Putnam & Borko, 2000; Wells, 2002;Mercer, 2010; Smagorinsky, 2010).

Methodologically, it aligns with the sociocultural view to cognition, which proposes a situated examination of learning and development taking into account individual histories and needs (Golombek & Johnson, 2004;Johnson, 2006). This view entails that learning is a much more complex than a quantified set of outcomes and needs to be examined from the inside in order to account for learning as developmental process (Cots & Tusón, 1994; Van Lier, 2011). Indeed, delving into the process of teacher learning, within a socioconstructivist paradigm, allows to productively overcome the sterile duality of process-product and can reveal valuable insights into

the complexity involved in pursuing the multifarious goals of teacher education, as they will be described further on.

1.4. Contributions to FLtE

Teacher education in blended environments is a novel practice in comparison to other disciplines (Kocoglu, Ozek, & Kesli, 2011). The present research contributes to research on this new practice. Specifically, this research:

1. Empirically and sequentially demonstrates the relationships that are formed between face to face and network-mediated communication and the ways these contribute to an epistemological understanding of language learning and teaching.

Through this approach, this research promotes a bottom-up sequential understanding of the factors that may empower student-teachers to develop professional teacher skills and competences in blended learning environments; and the potential of integrated technology mediation for the development of higher order thinking in ITE.

Few studies, currently available, offer a comprehensive trajectory view of the process of teacher learning in blended environments. Equally few provide in-depth qualitative analysis of the interrelationships that are formed across multimodal interactions (classroom and computer-mediated communication). In this sense, the empirical analysis of learning as process and product fills a gap in FLtE literature and adds a much-needed approach to understanding the affordances of CMC integrations for teacher cognition in initial teacher preparation programmes.

2. Identifies learning gains that were obtained at the nexus of multimodal dialogic activity, as they were identified by the participants themselves.

The findings indicate development of epistemological and pedagogical content knowledge, relational and technological competence and point to the potential of telecollaboration to afford multiple dialogic opportunities for reflection underlying the appropriation of cognitive tools.

3. Draws pedagogical implications of this model of learning for future blended pedagogy

The findings indicate that this model served as a needs-based purposeful approach to teacher education. Telecollaboration expanded classroom and school placement learning in unique and significant ways and accounted for the development of transferable teacher knowledge and pedagogical skills. Overall, this research contributes to the quest for effective responses to the educational demands of the “changing world” and is believed to bear useful insights and guidelines for teacher educators and foreign language teachers who wish to integrate CMC practices in their teaching.

1.5. Research outline

To begin with, the research comprises 12 chapters and is organized in 5 parts.

Following the research overview in Part I, Part II lays the background of this study. Chapter 2 places this research in the wider international context of FLtE of teacher education and outlines the visions, goals and challenges faced. Chapter 3 reviews and critically discusses existing research on integrated approaches to FLtE in relation to the objectives and contributions of the present study. The final chapter of Part II sets the research theoretical foundations. Specifically, Chapter 4 elaborates on Vygotsky’s sociocultural theory of mind and aspects of Bakhtinian and Meadinian theorizations on learning that emerged as relevant during the analytical and interpretative process. These conceptualizations exemplify the sociocultural essence that learning

is a developmental process that emerges through interaction and physical experience with surrounding social and material conditions, which informs and is empirically substantiated in the analysis.

Part III describes the research methodology. Chapter 5 discusses the methodological foundations that informed the steps followed to materialize the research objectives. On this basis, it describes and evaluates the approach taken. Chapters 6 and 7 provide a guide into the implementation of this methodology; these two chapters respectively reconstruct the process of data collection, codification, screening for most salient outcomes and developmental interaction analysis.

Part IV is dedicated to research context and data analysis. Chapter 8 portrays the socio-political context of Catalunya and conveys the requirements for FLtE as they are documented in the national and Catalan curriculum. Then, it describes the pedagogical proposal implemented for teacher learning. Following, Chapters 9-11 materialize the dual objective of this research to examine teacher learning developmentally in its process and product dimensions. They trace three lines of development that emerged as most salient in the data in the cases of 3 student-teachers. Namely, Chapter 9 analyzes the student-teachers' achievement in (1) strategically plan instruction for their respective teaching contexts of primary education; Chapter 10 analyzes their development of (2) relational skills and competences in working with and contributing to others' knowledge; and Chapter 10 traces the development of (3) digital and integrated skills. The analysis is presented as a reconstruction of the student-teachers' learning process in what, are referred to as episodes (of multimodal events) of cognition. Overall, Chapters 9-11 analyze nine episodes of cognition, three for each focal student-teacher.

The writing style is in line with the main goals of the GT methodology for doing scientific research, in which the researcher becomes a 'window' for the reader to see the process through the eyes of the participants themselves. In this light, the reader is encouraged to understand the learning process as a network of relationships between people, resources and learning environments, all contributing to the formation of an eco-system of opportunities for learning.

The dissertation concludes with an overall appraisal of the research, its strengths and limitations. Chapter 12 (Part V) discusses and evaluates the findings drawing on the theoretical foundations and pedagogical guidelines previously established. It discerns pedagogical implications and suggests future research pathways.

Part II

Background

2. General orientation into the world of learning and FLE

I never teach my pupils. I only attempt to provide the conditions in which they can learn.

– Albert Einstein (1879 – 1955).

Overview

This statement by Albert Einstein touches on the roles of teachers and students and encourages discussion on the object of teaching. Educational researchers and teacher educators have repeatedly put forward that teachers should not act as the authoritative holders of knowledge. Rather, they need to become creators of learning opportunities and guides of the learning process, for which they need to be considered and trained not as black boxes receiving and reproducing knowledge but constructively taking into account their needs, previous experience and knowledge (Johnson, 1996; 2006). As emphasized in socioconstructivist theories of learning and development, the key goals that the teachers should pursue in their instructional endeavours is to empower students to take control of their own learning, and support them in developing meaningful knowledge and skills to efficiently navigate the world.

In order to better frame the discussion on this issue and thereby provide a context to this dissertation, it is important to first understand the modern societal relevancies and the emerging goals for FLtE.

2.1. Education in the globalized era

Education reformists underline the profound changes that society has undergone due to the exponential advent and high penetration of Information and Communication Technology (ICT) in all aspects of everyday life (Lipman, 2000; Jung, 2005; Egbert, 2006; Dooly, 2013). These cosmic changes on a global societal level, as Kozma, (2011; 2012) argues, account for the development of much more informed and more collaborative social and professional practices. The fact that education still adheres to old times and practices poses significant dilemmas for students, teachers, teacher educators and generally all educational agents, who find themselves in need to respond to increasing and complex demands (Dooly & Sadler, 2013).

In this light, education reformists point out the urgency of a global reform. This reform should consist in a systemic change of education with the long-term vision to drive “knowledge society” and “knowledge economy” (Kozma, 2012). The realization of such goals requires that individuals develop knowledge, skills and competences that will enable them to commit to lifelong learning, creativity and innovation, and not plain consumption. To these ends, educational researchers emphasize the centrality of cultivating an educational system that will favour and promote agency and individual expression in order to move beyond standardization of knowledge and embrace customization, free expression, integration, and production (ibid.).

These proposals posit that school curriculum should be aligned with real-world practices and provide students with substantial resources and guidance through ways of making effective use of the resources available in order to develop and deepen knowledge (Song, Owens, & Kidd, 2009; Sternberg, 2010; Dooly, 2013).

In recent times, the increasingly greater volumes of available knowledge and the “acceleration” in the way information circulates from many to many through technology has instigated substantial dialogue about the creation of new forms of learning, described as “invisible learning” (Cobo Romani & Moravec, 2011), “open” or “personal” learning (Downes, 2010). In a recent talk at the VI International Seminar of the UNESCO, Downes, chair in e-Learning at the Universitat Oberta de Catalunya, talked about personal learning and questioned the relevance and efficiency of traditional formal education that does not take into account the networked structure of today’s society. According to this view, personal learning is understood from the perspective of the students - not the institutions- and is qualitatively different and arguably more sustainable than institutional learning.

The potential of Web technologies in simulating “the real world at a much higher cognitive level” (Tella, 1996: 6) and facilitating learning has been widely acknowledged (Kern, Ware, & Warschauer, 2008). Within the socioconstructivist paradigm, the Web has been found to offer tremendous potential for mediating higher cognitive development through extended social interaction and agentic student-centred activity (Thorne, 2004). Leading researchers have argued that learning, which is significant to real life happens through social networks, Web 2.0, virtual worlds and online gaming. In foreign language education (henceforth FLE), research indicates that web-mediated communication has great potential for (inter)language development and hosts a variety of interactional patterns, which facilitates the language socialization process (Kramsch, 1993, 2000; Tudini, 2003). Thorne and Payne, (2005) and Thorne and Black (2007) lay out the affordances of Internet-mediated L2 learning activity in terms of emerging communicative genres and promotion of new linguistic and cultural roles. The great potential attributed to online interaction lies on the fact that language learning is not static; it is dynamic, real-life, people and

culture-oriented (Belz & Thorne, 2005; Belz, 2002; Muller-Hartmann, 2000); Multiple authors have embraced the view that language learning is about developing proficient communication skills (Kern et al., 2008; Thorne, 2006) to effectively do pursue goal-oriented activities in collaboration with others (Barson & Debski, 1996; Kissinger, 1998; Belz & Thorne, 2005; Kramersch & Thorne, 2002). This shift in understanding language learning “beyond the classroom and into the world” (Franklin, 2007; Dooly & Sadler, 2013; Dooly, 2013) is essential in order to promote an advanced language proficiency, which can by no means be understood in terms of sterile structures, forms, fluency, accuracy or comprehension. Siemens and Downes posit that teachers and students should use the content as the “conduit for connections” i.e., to form relationships with other people that can go beyond the specific timeframe of instruction. These authors place the emphasis on the “strength of the ties” between fragmented information and portray learning as a “linking process” (Downes, 2006; Siemens, 2008). This process, as they argue, should aim at developing the ability to make and understand connections between different sources of information acquired in interaction with different people and tools at different times and through different modes of communication.

It follows then that the ‘teacher-instructs–and-student-does’ idea of classroom practice is no longer relevant. Many language educators have documented the need to move away “from a hierarchical teacher-centred, risk-averse inwardly focused environment to one that is empowering, non-bureaucratic, open to risk, and focused outward to a larger community” (Franklin, 2007: 189). To the same account, Masats, Dooly, & Costa (2009: 341) state that “language teacher education cannot ignore that today’s children are brought up in a ‘wired’ society and soon grow into skilful and eager users of technology, which means that some of the social activities they will

engage in will take part in virtual communities” and that “teachers need to be able to comply to this new state of affairs”.

Considering the great amount and quality of informal learning taking place online outside educational institutions, educational researchers have looked at ways to merge the ‘outside-school’ learning experiences with more formal settings, arguing that there is need for a middle-ground since schools and educational centres are not going to disappear, at least not in the immediate future (see Thorne & Reinhardt, 2008 for an innovative pedagogical model for cutting across single disciplines or fields of knowledge and “bridging” current multiliteracy needs by operationalising the affordances of Internet-mediated communication). Researchers have repeatedly argued that technology needs to be integrated in a pedagogical frame of instruction in order to benefit learning (Dooly, 2008; Hubbard, 2008; Narciss & Koerndle, 2008; Schwartz, 2008).

If past learning practices have and are being quantitatively and qualitatively transformed by Web mediation and if 21st century education demands online foreign language education as mainstream practice, then teachers as part of the network of actors expected to contribute to the achievement of elevated standards in FLE need to find ways (methodologies and approaches) to inform and modernize their teaching practices in order to effectively meet the demands of an increasingly network-driven era. These questions invite discussion on what current and future teachers should be able to do, the competences that teachers need to master in order to contribute to the society and education of the future; and the characteristics, roles and responsibilities of both teachers and students in response to this new framework of learning and teaching (Alvarez, Guasch, & Espasa, 2009). This discussion will situate the implications for teacher education programmes.

2.2. Changing agilities and literacies: the 21st century student and teacher

One of the underlying ideas portrayed in the previous section is the learner-centred approach that lies at the essence of this technologically-mediated educational paradigm. This section takes up the profile of today's students and teachers, drawing on the descriptions of leading theorizers and language educators around the world, as basis for developing an understanding of; first the range of skills and competences that learners generally set out with, or skills that they should come to master for undertaking technology-mediated practices; second, we adopt a similar approach in order to define the range of skills that are required by teachers, so they are able to develop effective pedagogies to teach this new generation of "digital natives" (Prensky, 2001).

To begin with, literature provides a pool of metaphors to describe the new generation of learners; For instance, the very pertinent metaphor of the "networked student" (Dexler, 2010) that places this new generation of learners in precisely the network of abundant and unceasingly up-and-coming situated computer-mediated possibilities described in the previous sub-section. On the same note, other descriptions have been proposed such as the "Net-Gen" (Oblinger & Oblinger, 2005) or "Learner 2.0" (Guerin, Cigognini, & Pettenati, 2010).

Wagner (2010) helps us to understand the background of these typologies assigned to learners and teachers by describing the students' everyday network-mediated practices. First, he indicates that these learners are "very differently motivated", they are "growing up tethered to the internet" and "they are using the Internet to extend friendships that are based on real interests"; they use the internet for "self-directed, much more exploratory learning" and "as a tool for self-expression" (see also Kozma, 2012; Thorne, Black, & Sykes, 2009). Everyday life for these students normally involves constant connectedness, collaboration, and multitasking; thus anything different seems to

come across as non-natural and exacerbate the gap between institutionalized practices which are largely structured and real-life practices, which are essentially unstructured.

On the whole, the new generation learners are in their comfort zone when using technologies and are able to make connections, linking between different nodes of information available across environments and web worlds. On a macro-level, today's networked learners are generally skilled in basic functions related to the web such as creating, organizing and sharing content, engaging in processes of collaborating and interacting with others to construct, develop, and maintain social networks (Guerin et al., 2010).

In light of these changing agilities and new media literacies (Guth & Helm, 2010) or “hypertext literacy” (Pegrum, 2009:38), similar metaphors have been generated to describe the characteristics of a new generation of teachers to keep pace with the demands of a new generation of tools and the Learner 2.0. Such metaphors depict the teacher as the “arbiter of connections” or “learning concierge” (Siemens, 2008); “Teacher 2.0” appears as a “knowledge facilitator”, “organizer of optimal environments” that empower students to take charge of their own learning and “construct knowledge through engagement with ‘artefacts’ all within their Zone of Proximal Development” (ZPD) (Dooly, 2010: 280). Such metaphors stress the fading of hierarchy in learning and teaching and allude to a role of guiding knowledge-construction over a controlling knowledge role.

Probably the most often quoted metaphor used to describe teachers is the “guide on the side”, which precisely denotes that in the ‘networked reality’ teachers can no longer be the primary carriers and transmitters of knowledge; as opposed to the also often-quoted metaphor of “sage on the stage”, which is used to refer to the roles of the past. This latter term and the new status quo of

information abundant society and freely available Web-mediated learning opportunities may imply a less important role or even a substitution of the teacher. O’Dowd & Eberbach (2004) argue that the description “guide on the side” entails multiple and complex roles for technology-integrating teachers. In these roles, the teachers are required to guide learners towards cognitive density through technology-mediated activity. Cognitively dense learning requires organization and management skills, critical ability and creativity to explore solutions to problems as they arise. Such skills are seen as “enabling conditions” for constructing, what they term, their Personal Knowledge Management (PKM) and precursors to the lifelong learning skills of self-sufficiency (Guerin et al., 2010).

2.3. Teacher competences in the new globalized era

The issue of changing teacher roles and competences, following the shift to the socioconstructivist paradigm (Johnson, 2009), and in relation with the exponential advent of technology-mediated learning has triggered considerable research in FLE. In an attempt to synthesize the literature on this issue at hand, we draw on prominent work in the field of computer-supported language learning, including telecollaboration, and FLTE to depict an overall, yet representative account of the needs underlying this new cosmos of educational practices and subsequent specific teacher skills.

Relating their own experiences with telecollaborative intercultural education, O’Dowd & Eberbach, (2004) suggest that telecollaborative teachers should be able to raise learners’ awareness of intercultural learning, train students to make effective contributions, and move learners from monologue to dialogue; and as Kramsch and Thorne (2002) add, prepare students to effectively engage in “global communicative practices that require far more than local

communicative competence” (in Thorne, 2003: 47) On a collaborative teacher level, O’Dowd and Eberbach, (2004) suggest that online teachers should be able to establish and maintain an effective relationship between teaching partners, which refers back to the teacher as “horizontally networked” (Johnston, 1995, see also Dooly, 2008); this metaphor emphasizes the disposition and ability of the (online) teacher to work across disciplinary boundaries and across groups. Dooly (2010), while warning about the challenges involved in attempting to define the qualities of the Teacher 2.0 as stable entities - given the complexity involved in the language classroom and the language learning activity itself - argues that doing so provides a useful basis for understanding the skills that are commonly involved in the concept of Teacher 2.0, who is working within a socioconstructivist paradigm of learning and development. This author points out pedagogical and organizational skills such as the ability of the Teacher 2.0 to effectively manage diverse learners’ idiosyncrasies, backgrounds, learning styles and dexterities in an inclusive task or project-based learning environment. This type of environment should foster multi-level, multi-agent and multi-modal interaction i.e., teacher-teacher, teacher-students and students-students in the classroom and online. Second, she argues for critical and reflective skills entrenched in the ability to monitor and assess the learning process aiming at constant improvement. The integrative element is essential for Teacher 2.0. Integrative skills involve in-depth understanding of the pedagogical value and implications of the socioconstructivist theory to teaching and learning, the ways in which it informs classroom practice e.g., assessment; and subsequently the sociocultural theoretical underpinnings of technology applications in education. Critical awareness and competence are inherent to integrative skills for manifold reasons.

Multiple authors have investigated the ways in which communication is constructed and enacted on the premises of different media, based on the premise that it is essential to assess the ways in

which technologies can be integrated into the institutional curriculum and practices as value-adding supportive pedagogical mediums - and not as *ad hoc* tools - to foster successful communication, social relationship formation and thus facilitate knowledge construction. For instance, Thorne (2003) has argued that the use of technology is not a neutral practice and that different Internet tools foster and have a different impact on interactional and communication patterns. This author posits that leading development in communicative genres underlying (language) learning are associated with different “cultures-of-use” of the Internet tools themselves; that is, the degree/extent to which learners are familiar with and engage with Internet tools has important implications for communicative engagement and subsequently (language) learning. Therefore, essential to teacher education is learning to think critically about the tools they are using and the affordances that each holds for telecollaborative tasks or projects, rich in interaction, that are conducive to learning. As Thorne (2003: 57) puts it, teachers and students should “interrogate the mediational means and their cultures-of-use as an important dimension of Internet mediated intercultural communication”. What is more, technology-mediated activity involves ethical moral and political issues and both teachers and learners develop “digital wisdom” in order to distinguish between good and bad, useful and useless information and technology in an ever expanding and finally entirely digitally-mediated world to the end of enabling cognitively-enhanced practices (Prensky, 2009; see also Guerin, Cigognini & Pettenati, 2010). These last few decades of technological, social, political, economic and cultural changes demand that teachers rethink the content of what they are teaching, beginning at the core of what comprises distributive knowledge within a framework of continuous interconnectivity (Dooly, tpb 2013). This discussion adds up to the role of the teacher in presenting opportunities/resources for learning and at the same time guiding criticality in regards to these resources, encouraging

students to filter through amounts of information and discern valuable resources from propaganda (Dooly, 2010). Once more, these metaphors imply a long-term vision of a modeller of reflective and critical thinking practices.

In addition to all the aforementioned, the inherent diversity and heterogeneity involved in creating network-based environments dictates that future teachers need to be prepared for the unexpected. Above all, teachers need to be flexible in order to accept that such situations might occur and efficiently and effectively deal with such situations. In connection with this, research indicates that skill development in network-mediated environments correlates with a change of attitudes towards technology and technology-mediated teaching and learning to endorse flexibility, relinquish of control and tolerance for ambiguity; online teachers should be risk-takers, experimenters and “at times be willing to be the learner in the classroom” (Dooly, 2010: 290; see also Sanchez & Beauvois, 2007).

All these projections entail momentous implications for teacher education programmes. It could be argued that ample, substantial and practical exposure with Internet tools and Internet-mediated training is essential to the pursuit and attainment of the above projections. The course investigated in this dissertation did not focus on telecollaboration or the integration of technologies *per se* but used model teaching of technology-integrated pedagogy as integrated experience, parallel running with classroom practice (Dooly & Sadler, 2013). The following chapters will explore how these implications contextualized in the specific environment of investigation of teacher learning and ‘blended in’ with the overall development of pedagogical content knowledge e.g. project-based learning, student-student interaction, real-life analogies, planning skills, creating new orientations for these teachers’ future practice in terms of technology-integrated pedagogy.

2.4. The long term visions of education

On the political level, the Bologna process reform (1999) aims at a complete reclassification of the educational scene in Europe. This agreement puts forward new and innovative educational practices in an acknowledgment of the (above mentioned) ‘anxieties’ of this new era, the new teacher and student roles, new tools, and new ways of assessment in a formal framework. Also see the framework of qualifications for the European Higher Education Area (EHEA). These recent milestones in the European context proposes not only changes in the accreditation system but sets new parameters for the quality of the educational programmes i.e., teaching and learning practices based on participatory work, values and roles of higher education and research in modern, globalized, and increasingly complex societies to encourage harmonization of educational standards and enable the smooth movement and employment between European citizens across member countries.

2.4.1. The European Curriculum for Education

One type of formal documentation in teacher education is the European Portfolio for Student-Teachers of Languages (EPOSTL), which is a set of guidelines to help student-teachers of languages to reflect upon their progress and also teacher educators to orient their educational practices. This document lists the formal competences to which future language teachers should align to effectively embark upon current and future societal demands (Newby et al., 2007).

Overall, these descriptors indicate that future teachers need to be able to provide their students with opportunities for ‘doing language’, including Computer-Mediated Communication to engage learners in interaction with “distanced partners” (in effect, echoing the findings of many of the researchers working in this area mentioned in the previous sections of this chapter). Student-

teachers need to be able to organize contextualized student-centred learning opportunities that involve multiple types of interaction (oral and written), and to design learning environments and instructional practices that enable their students to use the target language while developing an understanding of the relationship between context and language use in order to be able to function efficiently in various spheres of interaction with a long-term effect.

Certainly, there is no single or quantifiable prototype to easily define a good teacher and there is no single educational practice that could be used to achieve all the complex demands proposed in the new era. The goal of today's language education is to provide contextualized opportunities or "spaces for learning accommodating multiple possibilities for student action" (Harris, 2001), making use of multiple tools and resources to empower learners' active engagement in goal-oriented activity and thus guide them towards autonomy and decision-making and drawing an analogy between real life situations and real life learning (learning that comes about in real life situations i.e., communication with other people, real world artefacts in real settings); it is the teacher's responsibility not to teach concepts *per se* but to teach skills; to create rich and efficient learning opportunities that involve interaction for the students to become self-sufficient and autonomous.

These propositions set a whole new set of parameters for students (and subsequently for teacher education) by positing that the goal of teaching is to allow students access to authentic contexts and opportunities. In and through these provisions, students can take control and become owners of their learning process and are enabled to develop long-term real-life skills. In short, the above discussions indicate that, with the increasing penetration of technology in everyday life, the core

essence of learning has changed radically and point to the need of a paradigmatic transformation from a top-down, content-based to a learner-centred, competency-based education.

In this view, learning cannot be fragmented but needs to be seen as an inclusive entity; that is we can no longer talk about learning in sterile disciplinary terms since learning transcends single disciplines, people and settings. The underlying idea in current learning conceptualizations thus becomes a process of “learning to know” by deploying different tools (Putnam & Borko, 2000), rather than accumulating clusters of knowledge on a specific subject-matter. Wagner (2010) articulates the skills that learners need to have in the current technology-mediated and technology-driven reality. Amongst other dexterities, Wagner points out that students need to be agile and curious to explore and connect different types of information across networks of people and artefacts, and be able to use linguistic and diverse disciplinary content to carry out manifold social practices in collaboration with larger communities of learners. In the long-run, students should be able to “lead by influence, agility and adaptability, initiative and entrepreneurship” (ibid.). These long-term ends imply ability to carry out effective oral and written communication, analytical, and persuasive articulation, higher-thinking and research skills of analyzing, articulating persuasively, thinking, writing with voice, accessing and analyzing information, and the mastery of higher-order functions to carry out complex tasks such as problem-solving, reflection, and critical thinking.

2.5. The teacher education problem

Despite the widespread and commonplace portrayals of technology, networks, and virtual worlds as having invaded and transformed all aspects of social life, numerous positive disclosures of learning potential (Sadler, 2012) and the ensuing need for actualization of the teaching practices

to include technology-mediated pedagogies, FLE has been repeatedly criticized for lagging behind in implementing technology-based endeavours, unlike other fields of modern professional practice.

Increasing attention has been drawn to teachers' tendency to use CALL as supportive material and resources (BECTA, 2008; Dooly, 2009) and in this way "perpetuate the old rather than engage with and refine or re-invent the new" (Guth & Helm, 2010: 13) through an integrated form of pedagogical practice. Educational authors have continuously stressed that teachers need to understand that technology is more than an electronic device for retrieving information or a "kind of electronic library" (Harris, 2002 quoting Dave Sackett, CNN, 2001) or a supplementary tool for the classroom (Kozma, 2012); It is not about using platforms to post class materials anymore; it is about using those platforms to achieve pedagogical objectives and taking advantage of the potential of social networking to promote life-long competences relevant to real-life. Real life features team work and favours collective intelligence over individual forms of competence, and artefact supported, in line with socioconstructivist approaches to cognition over tool-free performance, aligned with cognitive approaches (Putnam & Borko, 2000; Sternberg, 2010).

To embark on these challenges, leading educationalists have long emphasized the need for powerful authentic opportunities to engage teachers in new ways of thinking about teaching with and through technology. TE programmes need to provide authentic situated opportunities for trainees to experience pedagogical and technical integration of online communication during their ITE or graduate education (Egbert, Paulus, & Nakamichi, 2002; Hubbard, 2008; Lambert, Gong, & Cuper, 2008; Dooly, 2009; Kozma, 2012; Dooly & Sadler, 2013). In the network-mediated era, researchers repeat that it is not enough to merely inform and introduce pre-service teachers to the

educational technologies through isolated/single ICT courses, but sought for pedagogical approaches to technology integration need to be adequately modelled by teacher educators and experienced by the student-teachers on a programme level in order to undertake the true needs of the times and enable future teachers to develop transferrable skills and transform their classroom practices (Desjardins & Peters, 2007; Dooly & Sadler, 2013). As Oxford and Jung (2007: 39) posit, “the more professional development a teacher receives, the more he or she is likely to report [...] a greater sense of preparation to take on tasks such as technology integration” (in support of argument made by Feighan (2004: 1) and consequently “the more technology exposure and involvement pre-service teachers have in their teacher education programmes, the more confident they will feel about teaching with technology” (ibid.; see also Desjardins & Peters, 2007).

However, despite the pertinence and validity of these argumentations, reality indicates that network-based education is far from constituting an integral part of mainstream teacher education programmes on initial and MA level. Hubbard's (2008b) and other surveys conclude that although technology is available and affordances to effective learning are well-known, teachers resist espousing technology-mediated and even less network-based pedagogies due to lack of ability and/or effective training. All of this then appears to nurture technophobic mindsets and exacerbate the tendency of discontinuity between real world and school practices (Kessler, 2006; Hubbard, 2008; Dooly, 2009).

Summary

This chapter consisted of a representation of key components underlying FL teacher education in relation to the idea and importance of integrating networked learning and teaching to educational programmes to the end of contributing to future societal and economic improvement. Drawing on

current literature and formal documentation in teacher education, this chapter approached the problematic areas of contemporary teacher education, as they have been identified in educational research presently available. This macro-context of learning and teaching in the 21st century in terms of current status, visions for the future and current policies supports the validity and overall contributions of this research and generates a baseline for evaluating the outcomes and contributions of this research. This research sets out to tackle the problem of teacher education as defined above, in and within the particularities of the Catalan context.

3. Previous studies on blended teacher education

Overview

A review of educational literature in FLE reveals empirical evidence of the potential of technology to “enable education” (Berge & Collins, 1995) through enhanced authentic opportunities for collaboration and peer interaction (Dooly & Sadler, 2013; Warschauer & Kern, 2000; Warschauer, 1996;1999) and the upbringing of a more learner-centred educational paradigm. Telecollaboration has been found to promote important language-learning outcomes e.g., pragmatic competence in terms of native-like use of address forms (Belz & Kinginger, 2003;Belz, 2007) and intercultural competence (Belz, 2003; Belz & Muller-Hartmann, 2003; Muller-Hartmann, 2000; O’Dowd, 2007), and interlanguage pragmatic development through simulated roles and identities, emotional connection in authentic practice (Guerin et al., 2010; Sykes, Oscoz, & Thorne, 2008; see Ortega, 1997) for a comprehensive critical evaluation of early CMC research in FLE). Telecollaboration as the more advanced generation of CMC communication has been gaining important grounds in the field of FLE mostly for intercultural communication and learning with powerful learning outcomes (O’Dowd & Eberbach, 2003; Dooly, 2009; Dooly & O’Dowd, 2012)

Following the impact and use-value of CMC in the foreign language classroom, this chapter examines recent empirical studies of the integration of online tools in Foreign Language Teacher Education (FLTE) programmes on the international sphere, the theoretical and methodological approaches adopted in these studies and the identified learning outcomes facilitated by the integration of CMC in teacher education; and relates the efforts being made to promote technology-integrated pedagogical literacy to foreign language teachers.

3.1. CALL pedagogy in teacher education: An outline

In light of the advances in technology-mediated FLE and current societal demands, literature documents various efforts to inform teacher education practices that endeavour to raise teachers' awareness on the relevance and potential of technology integration and teach them skills for integrating such approaches to the classroom. To this end, studies take up the approach of blended education integrating 'futuristic' i.e., virtual elements into traditional instruction practices (see also (Hubbard & Levy, 2006 for an up-to-date compilation of cross-institutional efforts of integrating technology in pre-service and in-service teacher education on a European and US level).

Literature identifies the need for situated integrated approaches to technical and pedagogical training in authentic teacher education contexts (Egbert et al., 2002; Egbert, 2006; Lambert et al., 2008). Approaches such as model teaching or models to be followed for promoting teacher pedagogical, technical and integrated skills are emphasized over single CALL courses (Willis, 1997; Willis & Raines, 2001; Fuchs, 2005a; Fuchs, 2005b)

The impact of technology in ITE programmes has been researched using multiple methodological approaches, producing findings to support the view that network-mediated communication is beneficial. The case study research strategy is generally employed as an exploratory approach to

advance an understanding of learning through integrated technology i.e., course outcomes as situated practices in particular sociocultural contexts.

Relevant literature on blended teacher education may be categorized as quasi experimental, diagnostic and ethnographic, although these distinctions may not always be explicit or clear-cut but skillfully mixed together in design, methodologies and approaches to data collection and analysis.

Quasi-experimental: studies that aim at making comparisons between control and intervention groups in which technology integration was used. Studies using this approach tend to focus on objective knowledge with research questions that can be answered by yes/no questions and operational definitions or variables to be measured. These studies employ largely quantitative or mixed methods to cognitive development.

Diagnostic²: qualitative studies that examine and evaluate the types of interactional behaviour produced in online environments and the kinds of cognitive development produced by future teachers in online contexts with the purpose of investigating the potential CMC settings as viable community on the basis of formal theoretical descriptors deriving from the theoretical background and literature.

Ethnographic: studies proposing aiming at a thorough understanding of a phenomenon through immersion into a field. The most common technique for carrying out an ethnographic study is participant field observations. This type of *in situ* exploration is a scientific research approach widely adopted in social sciences. It is a methodological approach as well as a general orientation

² The term diagnostic is borrowed from Stebbins (2001) and denotes a specific sense given to exploratory research that aims at systematically examining an idea or a phenomenon in order to determine and identify its nature through its particular constituent elements.

to doing research and is guided by curiosity and the underlying principle that not everything is known about the world. Within this approach it is assumed that acting with formulas is not sufficient for understanding a phenomenon (see Stebbins, 2001). In terms of analysis, these studies adopt a descriptive and interpretative bottom-up emic approach towards final learning outcomes or relevant processes and aim to contribute to learning or development of higher-order functions (in Vygotskian terminology) through methodologies based on grounded data analysis e.g. Grounded Theory. They largely describe and analyze specific events of cognitive learning in moments and not developmentally. Often, these studies also adopt an action-research approach i.e., use of the outcomes of implemented practices for reconstruction and critical (self-) reflection aimed at future improvement.

While also exploratory in terms of underlying learning processes and outcomes, this research examines the mechanisms underlying the process of teacher professionalization as the student-teachers move across multimodal settings to construct knowledge as active agents, in a distributed framework of opportunities for learning; This research seeks to unravel the dynamics of the setting of teacher professionalization in their temporal dimension (Mercer, 2010); thus demonstrating and analyzing learning developmentally.

3.2. Critical appraisal of previous work

3.2.1. Quasi-experimental research on the contributions of integrated online environments

Following a need-based interventionist approach, Pérez Cañado (2010) introduced a network-based approach, including asynchronous telecollaboration with American e-tutors to a pre-service teacher training classroom. The practice/research case aimed to tackle a persistent quandary in

higher education in Spain: promoting lexical competence in English and improving learner autonomy in the process of lexical acquisition in accordance to the requirements of European Higher Education Area (EHEA). This author examined lexical competence in terms of idiomatic expressions, word meaning, collocations in control and experimental groups, by measuring and comparing the end-of year vocabulary uptake by the students. This study's findings showed improvement in English vocabulary skills, and also that the experimental group had gained insights into American and British culture. This research is also complemented by qualitative data acquired from open-ended questions in the form of post-questionnaires, which indicated students' motivation and positive attitudes towards network-based mediation to lexical achievement.

Kocoglu et al., (2011) draw on previous comparative studies of blended learning environments- they cite the Harrel & Harris, (2006) study who compared performance of student-teachers in blended and traditional face-to-face instructional environments and found that blended environments could be associated with an increased number of people entering the teacher education programme. In turn, these authors offer a comparison of blended and face to face version to FLTE in an MA course in Turkey, primarily based on quantitative measurements (metrics) of final outcomes and assessment scores. The authors use a small sample of participants and generally support the argument that the merger of these two modes of learning promotes different skills and different aspects of learning; their quantitative analysis did not find any significant difference in terms of content, which they measured against the specific formal descriptors defined in the Cambridge Teaching Knowledge test. Their qualitative results showed that the blended version had implications for increased motivation, access to technology, flexibility, information and material sharing.

The use of comparative studies between blended & f2f environments can provide important evidence that blended learning can provide opportunities and benefits not available in only f2f situations (see also (Means, Toyama, Murphy, Bakia, & Jones, 2010; Shachar & Neumann, 2003). However, different from this type of studies, the aim of the present research was to delve in-depth into the interactions of the blended learning environment, following a primarily qualitative approach in order to unravel the underlying mechanisms affording development.

3.2.2. Diagnostic research on the contributions of integrated online environments

In the same context of technology-integrated pedagogies, a number of studies explore community formation in online environments and argue for the potential of asynchronous technologies to foster collaborative and participatory, problem-solving environments.

Kamhi-Stein, (2000) describes the development of a practicum course at the California State University where two forms of asynchronous CMC were integrated into the traditional practicum curriculum: WebCT Electronic Bulletin Board Discussions and WebCT E-mail Dialogue Journal. The aim was to reduce the distance between teacher learners and the larger community of mentors, teacher educator and peer teacher learners by providing enhanced and more private interaction and reflection. The author argues how CMC afforded a sense of community, where all the members shared a common interest; in extension, she found that the integration of asynchronous communication created a more learner-centred environment in the sense that teacher-learners could discuss privately and publicly issues of concern related to classroom life in a dialogic configuration. This reduced the social distance between mentors and students and facilitated the joint construction of knowledge. This author argues for the importance of such integrated approaches to CMC and pedagogy. She concludes that through this integrated approach

teachers developed a more extensive repertoire of strategies for L2 classroom, developed CMC skills of the specific tools and were able to conceptualize the role of this technology for enhancing student-student and student-teacher interaction. As will be shown further on, the findings of the present study also demonstrate enhanced sense of community, which the student-teachers emphasized as fundamental to their development.

Kamhi-Stein's study is primarily descriptive of the implementation context, the rationale of the intervention and the positive outcomes of the integration of asynchronous communication in traditional face-to-face instruction as conducive to learning. More recent studies demonstrate how community can be created through pedagogically-informed technology mediation and delve more into the interactional dynamics of asynchronous collaborative environments.

Arnold, Ducate, & Lomicka (2007) employ asynchronous computer-mediated communication (ACMC) to promote reflection, social and cognitive presence, teaching presence, building on the findings of previous studies. They report on a one semester pre-service teacher training course in which virtual discussions via an electronic bulletin board were used to enable 3 different classes of pre-service teachers of varied levels to research and share findings on a pedagogical topic of importance to them, based on their classroom observations. The task followed the format of a jigsaw in which different individuals had different information that they had collected about the issue at hand from different learning spheres i.e., classroom observations, teacher interviews and literature. The online component and task also provided for interaction of these students and expert teachers. Arnold, Ducate and Lomicka (2007) analyze their data i.e., discussions and end-of-year surveys using a qualitative content based analysis and developing a categorization scheme

based on a purposeful merger of the Community of Inquiry (CoI) framework (Garrison, Anderson, & Walter, 2000) and the Community of Practice (CoP) framework (Wenger, 1998).

Their findings identify positive attitudes towards the project and the possibility provided for peer and expert interaction on topics of interest for them and the opportunity to access a greater amount of ideas and compare and contrast thoughts, enabled by technology. They conclude that this configuration of environments is beneficial for learning and argue for the formation of a “distributed community of practice” that extends beyond traditional combination of the face to face and school environments.

This research provides qualitative evidence of instances in which the large array of ideas and thoughts exchanged during virtual exchange drove teacher development and reinforced classroom instruction in significant, for the participants, ways, underlying a sense of confidence engendering competence.

Within the frame of social technologically-mediated community, Lord & Lomicka, (2007) examine the quantity and quality of reflective types that emerge in the journals of 3 groups of student-teachers’ who undertook different mediation experiences: traditional individual reflection-no social mediation, limited social mediation (e-mail exchange with peer group) and extended social mediation with collaborative cross-institutional partners through virtual (asynchronous) technology in order to evaluate the effect of technology-mediation on the development of reflective skills. They argue that qualitatively enhanced reflective practice consists in moving beyond descriptive reflection (which is considered as less indicative of writers’ beliefs) and encompassing the development of more complex reflective thinking i.e., critical or dialogic reflection contingent with community building, encouragement/praise and suggestions/advice.

They conclude that the extended social mediation facilitated by asynchronous communication tools can significantly increase the quantity and the quality of reflective practices and thus further substantiate the benefits involved in the view that reflection is socially-mediated. Chen's (2012) study also supports the point about the development of reflection on occupational, pedagogical and academic issues emerging as pre-service and in-service teachers engage in task-based collaboration through ACMC environments. Pre-service teachers develop vision of professional practice and lesson planning skills through collaboration with more experienced in-service teachers.

Reflection is one central component of learning in this research, reinforced by extended activity in the virtual setting. The following chapters will demonstrate how the skill of reflection and critical thinking developed across multimodal interactions and highlight the specific affordances of the virtual setting for this practice through concrete situated examples.

With a notably different approach to data analysis but still with the same thematic and “diagnostic” rationale of community building and cultivating a sense of community, Scherff & Paulus, (2006) study reports on the innovative creation of an asynchronous discussion forum that aimed at giving instructional and psychological support to student-teacher. These authors identify these aspects as a relevant and important need of student-teachers in their professional socialization both in their first year of professional socialization and after graduation. Specifically, their initiative targeted university graduates and sought to facilitate the passage from university to actual teaching. Through literature review and personal experience, they identified isolation and lack of community support as barriers to graduates’ smooth adaption to a professional life. In this study, they qualitatively explore the participants’ behaviour on this forum

and analyze the use-value of this initiative, using Grounded Theory methodology. Their findings indicate that the participants primarily used this space for providing emotional support through empathetic listening and talk, humor and support and to express feelings of stress and to share stories from the school. The teachers also appreciated the increased student-centeredness and the opportunities for action in a non-controlled task. The authors found that the participants used the forum for instructional purposes but to a lesser extent than for psychological support purposes. Overall, they argue for the use of technology as a valuable support for teacher education and emphasize the importance of technology to afford extended time for communication between educators and teacher trainees.

3.2.3. Ethnographic research on the contributions of integrated online environments

In this section, we include studies under the label “ethnographic”. This label is employed either because the authors themselves use it to describe their research and methods of data collection or because it can be discerned that they were participant observers in the design and implementation they are referring to their own work and make explicit reference to interactions taking place in surrounding contexts of telecollaborative activities i.e., class discussions. The central philosophy in these studies rotates around the concept of model teaching and their aim is to provide transformative experiences to the student-teachers to enable transferral of knowledge and skills to their future teaching.

For example, Müller-hartmann, (2006) draws on Byram’s (1997) model of intercultural competence to inform the design of a project aimed to prepare and enable future teachers to teach intercultural competence as one of the most important competences and skills of the “new world”. The project engages German and American partner groups with previous intercultural experience

abroad in email and chat discussions. This author collects data ethnographically and re-operationalizes Byram's (1997) intercultural competence model to analyze/categorize and evaluate the outcomes of his implementation in terms of intercultural learning as they appear in student-teachers' post-comments/reflections on experience. The author also makes explicit reference to expansion of knowledge through experiential learning; that is, learning which could not be achieved through f2f classroom instruction. His findings indicate how this guided experience reinforced intercultural learning on the culture by developing new aspects and intercultural competence and critical awareness e.g., factual knowledge of own and other cultures, the existence of certain stereotypes; intercultural communicative competence in terms of allowing student-teachers to skillfully deploy interactional strategies for respectfully mediating knowledge of a culture as well as critical media literacy of texts of cultural content and technology for promoting pedagogical purposes (see also (Belz & Muller-Hartmann, 2003).

Müller-Hartmann's study corroborates the value of model teaching for promoting internet-mediated education for foreign language and intercultural teaching and learning. As the author argues, this experience contributed to a transferable "teacher knowledge building" i.e., security with the subject matter and the practice of telecollaboration and positive attitudes about online learning and development of pedagogical content knowledge in regards to telecollaboration in future classroom practice. The student-teachers also demonstrated awareness of relevant teaching skills regarding the implementation of telecollaborative projects and set the "emotional anchors" for future practice. Very importantly, this author emphasizes the value of reflective tasks in raising student-teachers' awareness of the process of their learning (the role and pedagogical value of the tasks proposed) as a first step to promoting transferral of skills. According to the author, reflective tasks act as mediators for considering the pros and cons of telecollaborative

projects; deliberating on the relevance for their professional future helped enable connections between university training and future teaching.

In pursuit of thematically-similar pedagogical objectives, Fuchs (2005) examines topic negotiation in intercultural encounters between German and American MA pre-service student-teachers engaged in a project of creating a joint website-based module for teaching intercultural content. Fuchs analyzes instances of negotiation of student teachers in process data i.e., chats and emails in FirstClass for formats and stages of topic negotiation. She then triangulates her findings with assessment data i.e., student-teachers' reflections, pre- and post questionnaires, and post interviews. This author places emphasis on the participants' identifications of their learning and the challenges they encountered; She finds that these challenges were related to institutional factors, sociolinguistic problems, technical and logistical difficulties i.e., the specific tool mediation (allowing for synchronous vs. asynchronous communication); and the inherent aspects related to distance collaboration. The comparative element of the diagnostic studies reported in the previous section is also present in Fuchs' (2005) study. With the aim of discussing the pedagogical implications of this implementation, Fuchs examines the collaborative attitudes and practices of a "successful group", as she calls it, in coping with contextual contingencies, and uses her findings to inform future practices, following an action research approach. She suggests more time allocation to building trust between telecollaborative partners, pre-contextualization practices in regards to courses and learning goals of each partner institution, guidance in terms of appropriate sociolinguistic strategies for efficient interaction and communication and inclusion of the goal of raising critical awareness of the efficiency of different media for telecollaborative projects. Evaluating the long-term pedagogical value of modelling CMC in this setting, Fuchs' findings indicate that student-teachers appreciated the fact that this experience allowed them

larger sense of community, cross-cultural awareness and the hands-on experience with the challenges and benefits it entails, which contributed to raising awareness of the requirements to be fulfilled by both teacher and learner prior to engaging in such projects, In terms of transferral of telecollaboration in future teaching, Fuchs also documents positive attitudes and motivations but less sense of competence in doing so.

Investigating the development of intercultural learning in the strict sense is not a primary objective of the analysis to be analyzed in its own right. Nonetheless, this aspect will be discussed in the context of the overall professional development and specifically the development of skills and competences of effectively communicating and working with people from diverse cultural and professional backgrounds. At the end of the course, the student-teachers conferred the relevance of telecollaborative projects for intercultural learning based on the understandings that emerged from their own experience and in relation to the task of collaborating to create and improve teaching material.

Slaouti & Motteram, (2006) share the self-reflective orientation of Muller-Hartmann and Fuchs' action-research methodology. They operationalise these concepts in a "reconstruction" of the process underlying the design and implementation of a CMC-oriented MA programme in the UK. The programme addressed practicing teachers from language or education-related disciplines originating from different sociocultural backgrounds with some or no experience with technology. Also following the idea of situated experiential learning, the thematic objective of these two educators/researchers was to promote a comprehensive understanding of teaching and learning with ICT, including the role and value of technology in relation to different teaching and learning paradigms over time and contextualities e.g. learners' gender and idiosyncrasies. They describe how this implementation succeeded, not in promoting quantitatively rich ICT skills, but

qualitatively rich knowledge about language learning and teaching with ICT. These authors identify cognitive development such as reflection on teachers' previous classroom practices and theoretical understandings; as well as transferable outcomes of model teaching e.g. learner autonomy and critical awareness of different media and their affordances for (language) learning and teaching. The authors also found that the experience enabled the teachers in setting up and working with technology-mediated environments, thus fulfilling the long-term vision of this programme to develop transferable lifelong skills from the university context to actual teaching practice (see also Dooly & Sadler, 2013; Fuchs, 2006; Li, Lam, & Wu, 2002)

Similar to Müller-Hartmann (2006), these authors emphasize the role and distribution of the tasks in facilitating learning through reflection on practices. They identify the following as pillars in fostering positive outcomes for teacher education, including willingness and competence in pedagogical implementations of technology: (1) aim for reconstruction, rather than a change of mentalities, through targeted, need-oriented tasks and learner-centered instruction based on the participants' prior knowledge and their teaching philosophies (experiences and beliefs); this advanced meaningful engagement with the content and promoted transferable skills rather than technology skills *per se*; (2) experiential learning which afforded the development of technological skills; and (3) the interrelationships between learning, doing and evaluating their practices, which fostered a gradual development of reflection and understanding of the learning potential of the activities they experienced such as group work and autonomy. Based on these understandings, the participants reported that they felt encouraged to transfer their experiences to their teaching.

These pedagogical implications are in line with the findings of the present research, and are supported by empirical qualitative data situating them in the process of teacher development across face to face and virtual interactions and individual post-reflections.

Synthesis of approaches and findings

On the whole, the literature review, along with the numerous studies cited in chapter two³, indicates substantial efforts around the globe to transform present state of affairs in teacher education and bring curricular change; at the same time, it is made clear that integration is not yet a common practice on a programme level.

Multi-method approaches i.e., quasi-experimental, diagnostic and ethnographic –oriented research assert the use-value of online environments as viable communities for collaborative learning and skill acquisition, including critical thinking and reflection through enhanced social mediation. Quasi-experimental studies present functional pedagogical designs and interventions and lend valuable support to the discussion on the potential of blended environments to promote pedagogical objectives in teacher education and the need of change in teacher education programmes towards innovation.

Rounds of diagnostic fieldwork in online asynchronous environments converge to the point that it is possible to foster a sense of community for deeper learning through asynchronous communication tools and claim that communities of practice can be distributed and not confined to traditional face to face settings. Summarizing, these studies identify dialogue, mutual engagement and support, reduced emotional isolation, sharing feelings and concerns, stress and

³ The studies mentioned in chapter two were not discussed in detail because they did not specifically look at teacher education in blended learning environments.

anxiety relief as affordances of online environments underlying social and cognitive development. Studies, as the ones analyzed above, have shown that CMC in teacher education facilitates information exchange, generation of ideas, exposure to new perspectives, which allow future teachers to build on each other's ideas to expand their understanding and contributes to the promotion of higher-order skills such as critical thinking, analysis, reflection, evaluation, problem-solving, and synthesis (see also (Arnold & Ducate, 2006; Dooly, 2013; Lord & Lomicka, 2007).

On a tool/mediation level, asynchronous communication e.g., discussion forums, which appear to be the most popular in teacher education has been largely diagnosed to foster time for reflection and flexibility (Lord & Lomicka, 2007; Sadler & Eroz, 2008). Researchers make clear that the extent to which an online collaboration is successful in promoting quantitatively and qualitatively rich learning, high degrees of interaction and the development of a strong sense of community for deeper engagement (see Lord & Lomicka, 2007; 2008; Fuchs, 2011) depends on both the pedagogical frame in which it is embedded but also the technology used (see also Thorne, 2003).

Furthermore, ethnographic literature supports the potential of model teaching of technology-integration in teacher education programmes for boosting reality-education and bringing about educational change. These studies conclude that carefully designed technology-integrated pedagogy targeted to the sought-after goals of education can provide qualitative mediating experiences to raising critical awareness, increasing teacher self-sufficiency, and eventually facilitating future application in teaching practice.

The present study is particularly akin to this latter type of research in terms of approach and methodology i.e., ethnographic methods for data collection such as participant observation,

grounded theory analysis and multi-method, multi-source triangulation and to the idea of reconstruction as a situated approach to teacher learning based on professional needs, put forth by Slaouti and Motteram.

On a methodological and findings level, the above literature review

- revealed numerical representations of the potential of technology-mediated environments for teacher learning;
- presented alternative methodologies in investigating this potential;
- diagnosed the aspects/elements that make technology a valuable mediation through comparative-experimental methods;
- provided useful categorizations for understanding the overall tendencies detected in online activity;
- Reinforced the argument that technology mediation, if pedagogically-informed, has important and certainly non-negligible affordances for teacher education.

Nonetheless, the vast majority of the literature to date seems to overlook the dynamic nature of talk-in-interaction i.e., the interactional dynamics that underlie the process of teacher learning through task implementation, the various functional meanings that utterances admittedly have, and the inherent temporal dimension of meaning-making processes (Mercer, 2004, 2010). Most studies seem to either examine single aspects of learning as final product, placing the analytical emphasis on the online activity.

Yet learning is, as socioconstructivism posits, as much of an outcome as it is a process. Understanding this interrelationship and capturing the subjective experience of the learners in the task-as-process is essential in developmental accounts of learning (Ellis, 2010; Sfard, 1998; Van Lier, 2004). These gaps in previous studies point to the need to delve more into the empirical world of blended teacher education and the process of operationalising and materializing the task-as-workplan to examine the conceptual formation and skill acquisition in the making (Barab et al., 2001; Dooly, 2011). As Espasa, Guasch, & Alvarez (2013) point out in the context of investigating the affordances of online interactions for developing writing skills, it is crucial to look at how student(-teachers) utilize feedback to improve their learning. In order to understand the affordances of the online component, it is equally crucial to link students' learning achievements (outcomes) to their technological behaviour, elucidated through a deep look into their interactions (Badia, Barberà, Guasch, & Espasa, 2011).

The present study presents an empirical reconstruction of the process of learning with a focus on the interactional dynamics that took place during the activities afforded opportunities for collaborative construction of professional teacher knowledge and transferrable skills.

4. Learning: Theoretical underpinnings of research

Overview

This part presents the theoretical foundations underlying the analysis and interpretations of findings in this research. It is the outcome of an iterative process between theory and data analysis (i.e., coding and interpretation) and relates to dominant theorizations of learning and development, at the centre of which is language and interaction as the primary tool and medium.

This research project mainly draws from Vygotsky's sociocultural⁴ theory of mind. In the last decades, this theory has been established as the most influential theory on human learning and development and has increasingly been gaining grounds in the learning sciences. Related literature to date has extensively documented the impact of this theory as the sociocultural and dialogic turn in education and pedagogical practices (Johnson, 2000; Mercer, 2000; Wegerif, 2001). Sociocultural theory promotes the understanding of learning as a socially-mediated and historically-constructed developmental process. It provides the tools and methods for a

⁴ Literature uses different terminology to refer to the Vygotskian theory of development of mind. For instance, the term sociocultural-historical (Cole, 1995); cultural-historical (Veresov, 2005; Zinchenko, 1995) or socio-historical (Ratner, 1998; Valsiner & Van der Veer, 1986). This research adopts the term sociocultural as the most commonly used term used in studies in the field of education; and with the purpose of highlighting a focus on language and discourse for the development of mind (Lantolf & Thorne, 2006; Wertsch et al., 1995). Accordingly, this terminology is in line with its general and methodological framework.

comprehensive understanding of human cognitive development through interaction with the social and material world.

In addition, the examination of the communicative patterns that took place at different temporal levels within the academic year and found to contribute to specific learning outcomes oriented the interpretative process to the work of Mikhail Bakhtin. In a context of multivoicedness created by virtual, classroom, school and individual talk such as the one presently investigated, Bakhtin's notions of time and space (which he calls chronotope) in relation to polyglossia and heteroglossia is relevant for examining learning as a dialogue or an intertextuality of voices. This helps conceptualize utterances such as those made by the students both face to face and virtually at different points in time and how they contribute to the development of scientific concepts (Wells, 1994). Similarly, the investigation of learning as developmental process through sociocultural mediation over time is complemented by Mead's work on socialization underlying social roletaking processes through communicative action; which in turn stretches understandings on learning and pedagogy.

Finally, this dissertation uses concepts from Van Lier's ecological-semiotic approach, particularly the notion of affordances (Van Lier, 2000, 2011) to identify and recount conditions that may constitute a pedagogically useful environment with learning potential for quality teacher education (final objective of this research). Van Lier transforms sociocultural and dialogic ideas and concepts from the fields of psychology and ecological linguistics into guidelines for a pedagogically-relevant understanding of language learning through interaction.

4.1. Vygotsky's sociocultural theory of mind: An overview

In the sociocultural tradition, the essence of learning and development lies on the external social and material conditions in which it takes place (Ratner, 1998). The social environment is, what Vygotsky considered the fundamental source – and not a factor that influences human cognitive and moral formation (Veresov, 2011)⁵, not denying, however, that there can be other factors, biologically-inherited that influence human mind development (Howe & Mercer, 2007). The view that human cognitive development is an interaction between biology and society, embodied in activity constituted was the major turning point in subsequent research on mind development (Rogoff, 1990). These premises are to be found in Vygotsky's long-cited genetic law of cultural development.

Every function in the child's cultural development appears twice: first it appears on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological). An operation that initially represents an external activity is reconstructed and begins to occur internally [...] An interpersonal process is transformed into an intrapsychological one (Vygotsky, 1978: 56-57). [To conclude that] Human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them (Vygotsky, 1978: 88).

The idea is that cognitive development is achieved first on the social interpersonal (social) level and then on the intrapersonal (individual) level. The environment presents all the specific tools,

⁵ This citation draws from the researcher's notes taken during her participation in the ISCAR summer school Veresov, N. (August, 2011) "Introducing cultural-historical theory: main concepts and principles of genetic research methodology", Conference given during the Second ISCAR Summer University in Moscow, Russia (author's notes)

symbols and properties grow into the mind of the individuals and form their mental/intellectual activity.

4.1.1. Mediation

Vygotsky's theory was based in the field of psychology and his observations of how people develop their biologically-endowed and genetically-inherited properties into higher order skills and thinking through active engagement with others and with tools. The idea of learning in Vygotsky's theorization is that the person is born with specific capacities such as involuntary reflex, attention, memory to retain/ recall properties of the environment, aspects of experience in which they are emotionally involved (Lantolf & Thorne, 2006).

Social interaction triggers powerful internal processes of mental activity which becomes the foundation for consciousness development. Humans' unique ability to retain/ recall internalized properties of the tools and symbols triggers the development of higher-order behaviour (Vygotsky, 1978), in which case the artefacts leave the world of neutral meaningless objects to become mediating tools in activities to the end of achieving goals (Leontiev, 1979); The use of tools and symbols available in the physical and social environment qualitatively and quantitatively enhance otherwise less elaborated performance, and create new understandings and mental representations of the world. It enhances one's performance, influences ways of thinking and creates new mental structures, which lead to higher order mental functioning e.g., voluntary memory, attention, reflection underlying cognitive development (Edwards, 2007). Thus, the cognitive meaning and potential of tools and symbols and their mediating function depend on the activity they are embedded in and the purposes and goals they serve (Lantolf & Thorne, 2006). With these declarations, Vygotsky contributed to psychology and developmental theory with the

concept of social and cultural mediation and established that humans always act on and, very importantly, transform the environment through the use of culturally and historically developed tools and symbols and made available to them (Cole, 1995; John-Steiner & Soubberman, 1978; Lantolf & Thorne, 2006; Thorne, 2004).

On the constructed aspect of tools and symbols, sociocultural researchers use the term ‘artefacts’ to describe the cognitive and affective investment of previous generations inherent in socially available tools and symbols. They put forward that these artefacts are both conceptual and material and carry historically-constructed meanings and values since they are the outcomes of previous generations’ thinking and doing (Wartofsky, 1979; Lantolf & Thorne, 2006). Gradually, this mediation by artefacts becomes appropriated/ internalized by individuals and comes to form part of humans’ culture and habitual practices to the point that mediation is no longer directly discernible and thus not easily observable (ibid.).

4.2. The primacy of language as mediational means in shaping cognition and mediating development

Vygotsky argued that language is the fundamental provider and distributor of symbolic representations; and thus the dominant internally-modifying symbolic tool which transforms human thinking about the world and has a dialectically causal relationship with how humans think about and understand the world. He posited that:

By being included in the process of behaviour, the psychological tool [language] alters the entire flow and structure of mental functions. It does this by determining the structure of a new

instrumental act, just as a technical tool alters the process of a natural adaptation by determining the form of labour operations (Vygotsky, 1981: 137).

The cognitive and transformative value of language lies in its fundamental regulatory function (Mercer, 2000). Rogoff (1990) explains that, language mediates the transformation of neutral signs visible through the act of seeing or listening to meaningful signs important to other members of the community; thus sharing attention and purposes ; humans then learn to regulate their own behaviour according to these cultural ‘signs’, which “reshapes biological perception into cultural perception and concepts” (Lantolf & Thorne, 2006: 199). As Boroditsky (2011: 65) puts it, from a cognitive psychology perspective, language is a culturally-bound “cognitive toolkit” that encapsulates the knowledge and worldview developed over the years within a culture and shapes internal mental processes.

The implication of this theory in any attempt to understanding learning processes and artefact mediation is to observe the transformation as it develops over time (methodological guideline of this research). Vygotsky himself suggested the microgenetic method for studying the development of higher thinking in order to trace the transformation of thinking patterns and mental representations of the world.

4.3. More on the language as shaping the world: Bakhtin’s theorization

On a similar stream of thought as Vygotsky, Bakhtin saw language as carrier of historically-developed meanings and provides yet further insights into the nature, function and development of language. Developing his writings in the same sociocultural and temporal framework as Vygotsky but departing from the discipline of linguistics and not psychology, Bakhtin argued for the inherent dialogicality of language i.e. distinct, yet interrelated discursive genres in the context

of the novel, and is both methodologically and theoretically useful for this research objective to understand the mediating function of language-in-context in forming minds and mindsets over time.

Specifically, Bakhtin, (1986) theorized that the world was a historically-shaped multivoiced construction, driven by language. The constructs of heteroglossia [others' voices) and polyglossia [The simultaneous presence of multiple voices interacting within a single cultural system] emphasize this latter:

Heteroglossia (Bakhtin, 1981: 263) is the basic condition governing the operation of meaning in any utterance. It is that which insures the primacy of context over text. At any given time, in any given place, there will be a set of conditions – social, historical, historical, meteorological, physiological – that will insure that a word uttered in that place and at that time will have a meaning different than it would have under any other conditions; all utterances are heteroglot in that they are functions of a matrix of forces practically impossible to recoup, and therefore impossible to resolve. Heteroglossia is as close a conceptualization as is possible of that locus where centripetal and centrifugal forces collide; as such, it is that which a systematic linguistics must always suppress.

Bakhtin argued that language is in itself a multivoiced (heteroglossic) formation situated in specific social, cultural and temporal contexts and constructed through dialogue. In this sense, a concept, idea develops at the nexus of different developments in meaning occurring at different timescales and drawing on multiple sources and resources available. Thus, the world should be understood “as a part of a greater whole – there is a constant interaction between meanings, all of which have the potential of conditioning others. Which will affect the other, how it will do so and

in what degree is what is actually settled at the moment of the utterance. This dialogic imperative, mandated by the pre-existence of the language world relative to any of its current inhabitants, insures that there can be no actual monologue. One may, like a primitive tribe that knows only its own limits, be deluded into thinking there is one language, or one may, as grammarians, certain political figures and normative framers of “literary languages” do, seek in a sophisticated way to achieve a unitary language. In both cases the unitariness is relative to the overpowering force of heteroglossia, and thus dialogism” (1981: 426)

Apart from an interest in the etymological development of language itself, Bakhtin also felt that multivoicedness was significant in terms of ‘knowing’, Bakhtin considered that dialogue is the mechanism that drives this merge of diverse ideas, concepts, expressions initially articulated in others’ voices [speaking personalities] and gradually personalized in one and thus development of knowledge. He argued that every type of talk is representative of the time and space in which it was uttered, encapsulates and expands the meanings attributed to it. Each utterance, written or oral, contains “cues” that point to specific meanings in the social world that have a spatial and temporal dimension (Wortham, 2001) and underlie meaning making processes. Thus, arguably, detailed analysis of talk can enable understanding of the historical and sociocultural aspect and positioning of the agent who utters it. Furthermore, because language carries ideas, concepts, meanings and signs that become central over the years to the community and forms part of its identity, an individual’s voice is the outcome of the dialogue of multiple others’ ‘voices’. Individual voice is the appropriation of these multiple voices endowed with, what Bakhtin termed, personal ‘accent’. This concept provides a means of approaching the ‘multivoiced’ development of knowledge, as the participants in this study engage and appropriate ‘technical’ terms from their peers. Bakhtin emphasized that language is a social emergent and outcome of the dialogue

between different voices merged together over time, and not a de-contextualized system of words and meanings, which can be observed in the interactions in this study.

This dialogic approach and Bakhtinian understandings become theoretically and methodologically relevant to the purposes of this research to understand human cognition as a developmental process constructed over time and space (Wells, 1994; Wertsch, 2000; Van Lier, 2004; Mercer, 2010). They provide complementary understandings of the historically and socially constructed nature and function of language as a mediational means for human development. Specifically, the construct of chronotope and using language as nexus of previous voices articulated at different times and physical and social contexts allows going beyond the thematic content of each interaction, unravel the sociocultural/historical dimension of people's words and examine the student-teachers' response to instruction or received input (classroom, virtual, school); it allows tracing the travel of concepts and language across spaces and times throughout the course through "intertextual cues" (Wortham, 2001); in turn, it allows showcasing the final learning outcomes as polyglossic formations i.e., conversation between different voices over time and space; developed through specific activities and drawing on diverse discursive genres. One type of discursive genre is "authoritative talk" which Bakhtin defines as "the privileged language that approaches us from without; it is distanced, taboo, and permits no play with its framing context [...]. We recite it. It has great power over us, but only while in power; if ever dethroned it immediately becomes a dead thing, a relic. Opposed to it is internally-persuasive discourse, which is more akin to retelling a text in one's own words, with one's own accents, gestures, modifications" (p. 324). In the analysis text, this term refers to the tutor's discourse.

Bakhtin, (1981) himself posits that ‘knowing’ or, as he states “human coming-to-consciousness is a constant struggle between these two types of discourse: [authoritative and will and intentions of the speaking personality]: an attempt to assimilate more into one’s own system and the simultaneous freeing of one’s own discourse from the authoritative or previous earlier persuasive words that have ceased to mean”. Bakhtin’s notions lend theoretical substance to the argument that varying activities that embody distinct discursive genres contributes to the acquisition of scientific concepts and higher order mental functioning (which is the topic of discussion in the following section).

4.4. Learning as internalization and transformation of the world

As detailed above, sociocultural and dialogic theories emphasize that humans learn through the acquisition of symbolic representations of the world, which are inherent in the language, as well as other socially available artefacts and are distributed through interaction with others and tools (Hutchins, 1995; Rogoff, 1990; 2003; Lantolf & Thorne, 2006; Lantolf & Johnson, 2007; Veresov, 2011). The essence of Vygotskian theory is the transformational character of knowledge acquisition, and it is this aspect that holds developmental and pedagogical value. True learning needs to be understood as leading development.

He conceptualized a learning leading development process as a gradual fusion of “everyday” into “scientific” concepts. This latter is a new more complex type of knowledge that signifies the mastery and internalization of cultural artefacts. Scientific knowledge drives transformation and enables qualitatively new and more complex thinking and action (Wertsch, Del Rio, & Alvarez, 1995; Lantolf & Thorne, 2006). According to Vygotsky, everyday beliefs are internalized folkloric beliefs acquired through participation in community practices but remain abstract and

general since they lack empirical substantiation. They are either spontaneous (acquired through unconscious uptake in practical experience) or non spontaneous; acquired through deliberate instruction (see Lantolf & Johnson, 2007). As he puts it, everyday concepts were not consciously defined or brought to conscious inspection and therefore remain to the specific context in which they were encountered, and not susceptible to further abstraction. Articulating experience into language moves it into the conscious plane; the individual becomes aware of the concept and is enabled to move to higher forms of mental activity and performance (Vygotsky, 1962).

This conscious articulation of concrete experience transfers experience into a definite system and constitutes the first step towards the development of scientific concepts. Specifically, scientific concepts are characterized by generalizations of concrete experience from the local level to the abstract broader level. The acquisition of scientific concepts are empowering in the sense that, at this stage, individuals coming to master “higher-order cultural tools i.e., language, literacy, numeracy, categorization, rationality, logic” (Lantolf & Thorne, 2006: 198). In doing so, they acquire a conscious, broader sense of experience, show ability to theorize on own experience and use theory/science to draw conclusions on experience and in extenso acquire control and operate in a voluntary manner over the environment and their experiences. As Vygotsky puts it, “the adolescent who has mastered algebraic concepts has gained a vantage point from which he sees arithmetic concepts in a broader perspective (quoted in Bruner, 1986: 73).

This distinction between lower and higher-order concepts become particularly relevant to this research for understanding developmental stages of cognition from previously non-regulated (resulting from participation in diverse activities) to other-regulated (expert guided noticing and

reasoning) to self-regulated and thus conscious articulation of teacher phenomena (individual post reflection, reasoning on experience).

Vygotsky makes another important distinction to this account. First, he differentiates between the acquisition of words and the acquisition of concepts. Teaching and learning words counts on repetition, memorization and explanation, often limited to synonym finding, whereas the latter implies developing concepts, and presupposes, as Vygotsky states, a series of functions such as voluntary attention, logical memory, abstraction, comparison and differentiation; on which direct instruction cannot be brought to bear.

Vygotsky stresses the crucial role and potential of conscious/deliberate, targeted and systematic instruction in influencing the process of conceptual development by creating appropriate mediating conditions and hosting concrete activities for the individual to actively develop these internalized folkloric beliefs and previous ‘baggage’ histories into new scientific understandings; these scientific understandings should in turn act as mediational means to future practice (in a type of spiral metaphor) where previous knowledge informs future action and constitutes the basis for further improvement (Vygotsky, 1962; Wells, 1994; Lantolf & Johnson, 2007).

The above conceptualizations bring us back to Bakhtin and his conceptualization of creation of ideas, concepts and social norms through the dialogic nature of language and in extension, concept formation through different discursive genres, the development of scientific concepts moves through different types of talk embodied in social activities e.g. conversational, authoritative discourse, technical registers, all of which add up to systematic instruction of a concept (Wells, 1994).

4.5. The Zone of Proximal Development

Vygotsky illustrated the understanding of the social, guided and targeted character of learning (Rogoff, 1995; Wells, 1994) through the metaphor of an imaginary zone, which he termed Zone of Proximal Development (ZPD). He defined it as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

With this construct, he first counter-argued previous understandings of human development, which emphasized nature over nurture by putting forward that the individual continually enhances his biological heritage and develops higher order mental functions through participation in social interaction with others. Second, he highlighted the central role of participation, collaboration and increasingly less other-guidance to the development of individual self-control over thinking and doing.

Learning and teaching in a ZPD scenario is mutually and actively created by the participants engaged with each other in collaborative activity within specific social environments oriented towards development. Lee & Smagorinsky, (2000: 6) explain that a ZPD scenario "implies that more knowledgeable other(s) must understand and attend to the novice's conceptions of the target task and the cognitive sources that the novice brings to it. The interplay between the novice and the more expert other(s) is negotiated through language and use of artefacts". Also, with the ZPD metaphor, Vygotsky explicitly argued that learning can be enhanced at all stages of ontogenetic development through social mediation.

In the ZPD scenario, learning gradually moves from object- (reliance on objects for thinking) to other- (reliance to others' assistance/scaffolding for thinking) to self-regulation phase (ability of think with little or no external support) (see Lantolf & Thorne for a detailed discussion of the processes underlying internalization). This latter stage signifies the mastery of symbolic and physical tools by the individual without guidance from more expert others (Rogoff, 2003; (Lantolf & Thorne, 2006).

This is the foundation of subsequent understandings of cognition and advances in educational and pedagogical methodologies for teaching and learning and the new roles of teachers and learners as guides and doers respectively. As Edwards puts it “Learning as restricted to the individual, as it has been over the years, is now considered an “anachronism”⁶; instead, learning is considered essentially relational, featuring individuals who work together to construct understandings, meanings or solutions to a common problem or to create an artefact or product of their learning; and changing relationships with tools and people, acquisition of reflective self-regulating tools for thinking and acting (Edwards, in press). In Edwards’ (2007: 4) words, the concept of relational agency intends “to capture a capacity to align one’s thoughts and actions with those of others to interpret aspects of one’s world and to act on and respond to those interpretations.

In FL(T)E, this theorization translates into the pedagogical approach where the teacher is considered the facilitator of opportunities and of resources for communicative action and learner as the active explorer and deployer of these opportunities and resources to accomplish their goals and objectives under the guidance of the more capable others (Lantolf & Johnson, 2007).

⁶ This language is reported verbatim from Anne Edwards in a seminar titled: “Learning, Culture and Social Interaction. Cultural historical and activity theory approaches to learning” that took place on the 1st of February 2013 in the premises of the 1st International Scientific Seminar in Learning Sciences at the Universitat Internacional de Catalunya.

4.6. Cognition and affect

Another dimension to be explicitly considered for effective learning is the interrelationship between cognition and affect. Vygotsky pointed out that cognition involves both cognitive and affective aspects at all stages of its development. As Lee puts it more simply, learning is a “process of perceiving, thinking and feeling”⁷ and is distributed across other people, tools and practices over time.

Vygotsky used the term *perezhivanie* by which he sought to capture “the integration of cognitive and affective elements, which always presupposes the presence of emotions” (Daniels, 2008: 43).

Vygotsky (1994: 339) himself stated that:

The emotional experience [perezhivanie] arising from any situation of any aspect of the environment, determines what kind of influence this situation of this environment will have on the child. Therefore it is not any of the factors themselves (if taken without the reference of the child) which determines how they will influence the future course of his development, but the same factors refracted through the prism of the child’s emotional development.

Thus, learning processes emerge from interaction between more and less capable others and is imbued with emotional investment. In essence, what is highlighted in this conceptualization of learning is that not every social interaction leads to learning and not every aspect of social interaction becomes a psychological tool for self-regulated thought. Veresov⁸ (2011) explained

⁷ This language is borrowed from Carol Lee in a seminar titled: A theory of Cultural Modeling for the design and enactment curriculum that draws on all students’ cultural intelligence given on April 6, 2013 in the premises of the 1st International Scientific Seminar in Learning Sciences at the Universitat Internacional de Catalunya.

⁸ Taken from author’s notes from ISCAR 2011 Conference

that only those aspects of the inter-mental plane for which there is “dramatic collision” that promotes self-regulated thought; that is, a situation that creates inner tension or that engages the subjects’ interest, motives, and emotions and drives the activity (Bruner, 1986). Veggetti points out that *perezhivanie* has a dynamic sense as it draws on the plane of personality, of voluntary wishes desires and needs (Vygotsky, 1998) and also implies that the same situation/reality may be perceived, interpreted and lived through differently by different people (Kozulin, 2003).

The implications/conditions for the learning to take place lie in the need to engage learners in meaningful activities, with which they can identify and from which they can benefit and contribute. Edwards (in press) points out that in order to understand learning it is useful to remember that Vygotsky’s learners are not simply rational beings but also adapt their thinking and learning conduct taking into account the affective aspect of the environment. Elements of alimentionation of individual needs and intentions, and feeling of discovery underlying emotional engagement are valuable to learning. This point is also taken up in the analysis and interpretation of learning in this research.

4.7. Mediating processes to learning leading development

Another important contribution to theory about learning is Mead’s socialization theory. Aspects of this theory provide an additional lens to understanding the role of the social environment in the development of a sense of self and self-consciousness as teacher underlying specific skills and competences that emerged in the analysis. This theory was developed in parallel with Vygotsky’s; in different sociocultural contexts but followed similar lines of thought. Like Vygotsky, Mead considered that participation in society - and not biology - lies at the basis of the development of self and agreed that language in interaction i.e., socially-available and distributed symbols are the

underlying developmental mechanism. From this perspective, Mead conceptualizes learning as socialization into a community and consists in the development of a sense of “objectified self” in relation to the norms and practices of the social group one engages with. As Mead puts it, an individual “can enter as an object [to himself] only on the basis of social relations and interactions, only by means of his experiential transactions with other individuals in an organized social environment” (1934: 225).

Mead conceptualized this development as a continuous and reflexive dialogue between two aspects of self, the “me” and the “I” (ibid: 175-178). In Mead’s thinking, the “me” component represented the set of attitudes, meanings and values that one assumes based on participation in society and through which they evaluate their decisions and actions; and the “I” component relates to the creative aspect of self, intentions, goals and aspirations. According to Mead, the environment is the source of models and images of self that define appropriate objectives to reach, and which one imbues with own intentions, goals and aspirations. In other words, the development of sense of self is a constant reception-evaluation-appropriation process, which stresses the dialectic between social mediation and individual agency.

This sense of self or agency, the “I” is also directly related to/ derived from what one perceives is the perception of them by “significant others”; that is the reactions and responses of others whom they consider important to them. This relationship with significant others underlies the construction of the “generalized self” featuring the internalization of the characteristic features e.g., ways of speaking, thinking and acting according to the rules and norms which denotes membership in the social group one forms or wants to form part of.

Current educational research has investigated the links between Mead and Vygotsky's theory (Edwards, 2007b) and drawn points of convergence and divergence on particular aspects. The basic point that distinguishes the two theories despite their considerable convergence is Vygotsky's vision to transformational potential of mediation to the social whole, which was related to the particularities and needs of historical context in which the theory was developed while Mead focused on understanding the individual realization of self in relation to the social whole. Mead's theory has been used in psychological endeavours to understand social behaviour, personality and identity (Valsiner & Van der Veer, 1986). Although both personality and identity are important aspects part of learning and have been studied in educational settings (Wortham, 2006), this research is more pedagogically oriented in the sense that it seeks to discern conclusions about learning conducive practices that could be used for improving pedagogical practices rather than understanding identity from a psychological point of view.

I consider that specific constructs that Mead proposes serve this endeavour. Specifically, the understanding of "significant others", who in this context are understood as the members of the teacher culture i.e., tutor, school student and teachers, classroom and virtual peers are generally useful in understanding the impact and contribution of whole new type of virtually-mediated interaction in relation to the face to face interaction. In terms of the processes underlying development, Mead argued that the self or sense of self develops through 3 types of activities, each of them with different and increasingly more elaborated characteristics and in which language holds a central mediating role in generating development. Throughout these stages, individuals move towards the mastery of symbols and patterns of symbolic representations and competence development in effectively carrying out activities, which are aligned to and recognizable by the social group to which they adhere.

He also talks about imitation and classifies it as the preliminary stage of development. According to Mead, the process of development begins with imitating the behavioural communicative and corporeal patterns of the social others in their close environment but with no clearly established sense of self; the individual perceives and imitates what he/she perceives as socially significant, and which through own experimentation comes to appropriate as personally significant. On imitation, Vygotsky also put forward that it is an important stage to learning and attributed a developmental predisposition to this process indicating learning potential within the ZPD (Chaiklin, 2003). Vygotsky distinguished imitation from mimicry stating that this was a conscious goal-directed and transformative developmental activity (Lantolf & Thorne, 2006). Of special interpretative value in this research is the construct of social roletaking as a mechanism that facilitates internalization. As Mead states:

This “process of taking the role of the other” within the process of symbolic interaction is the primal form of self-objectification and is essential to self- realization (1934: 160-161).

Individuals engage in socialroletaking primarily through language. Gradually, they take on multiple roletaking drawing on the resources, models of thinking and acting available in the environment which they enact in their social interactions to address situations from others’ points of view..

Mead suggests conceptualizing the context of social roletaking as a game, which he considers a socially and psychologically modifying process. In games, the individual needs to understand and internalize the rules that condition others’ behaviour, assume the role and perspectives of the others in response to these rules and act accordingly.

The game involves a more complex form of role-playing than that involved in play. In the game, the individual is required to internalize, not merely the character of a single and specific other, but the roles of *all* others who are involved with him in the game. He must, moreover, comprehend the rules of the game which condition the various roles (ibid: 151).

Through this social roletaking individuals form relationships with their environment, develop communicative skills and gradually learn how to best navigate the social world they live in. In successful roletaking, the individual takes the stance of a “generalized other” (1934: 154) acting in accordance with socially accepted rules and using socially-accepted symbols, which alludes to the need of belonging and contributes to development of self in relation to others. By adopting a generalized attitude in relation to others they see themselves from that point and develop self-images, self-awareness, self-esteem and internalization of ways of thinking, concepts and ideas, which are important learning outcomes identified by the student-teachers in this context and are discussed in the analysis.

According to Mead, the developmental importance of this social roletaking lies in its anticipatory component, which moves this activity beyond role-playing and into the more complex form of activity of roletaking (ibid). Drawing on this construct, Reiman, (1999) discusses the importance and longer-term implications of socialroletaking for the development of “reflective judgment” and which he also portrays as central to teachers’ intellectual and moral development (p.559). Social roletaking allows the opportunity to engage with others’ perspectives, draw from the resources available; and externalize previous knowledge to carry out a specific task. Externalization of existing knowledge and active roletaking on the premises of a collective game and in response to the demands of the situation at hand drives further development and competence in working with

others and performing “agentic action with others” (Edwards, 2007: 3; in press). In turn, these processes are conducive to learning alluding to the dialectic of internalization-externalization in which the intermental shapes the intramental and the intramental projects back to the intermental during which internalized knowledge becomes objectified; thus consolidated, and is used to generate new understandings.

In this context, Mead’s notion of socialrole-taking is especially relevant for interpreting the findings and in turn theoretically situating and substantiating the decision to integrate network-mediated communication into the teacher education classroom as another powerful opportunity to developing relational skills; that is, working with others’, aligning with their thoughts and ideas and forming one’s own. It will be taken up as underlying mechanism of development in the analysis to demonstrate how the cohort of classroom, virtual and school demands generated goal-oriented imitation processes.

4.8. Ecology: ecosystems and affordances

Van Lier’s (2011) ecological-semiotic framework provides a synthesizing framework for sociocultural orientation, useful concepts, and pedagogical criteria for evaluation. Directly drawing from sociocultural theories, Van Lier’s framework (2004) became a particularly useful lens for studying and evaluating the pedagogical value of learning and development, taking into consideration individual agency and dialectic social setting. We particularly focus on Van Lier’s concept of affordances to reach our final objective of discerning the specific potential of blended learning environments for teacher education.

The ecological-semiotic approach builds on sociocultural and dialogic theoretical foundations thus puts forward the centrality of multiple and diverse social mediation. The approach represents

learning as emerging in an “ecosystem” (Van Lier, 2004) of concrete tools, activities, and participation in communicative and dialogic practices. The conditions for the learning to happen are perceived as opportunities (affordances) for learners to form meaningful relationships with other people, artefacts and environments and essentially supports good learning and teaching. The notion of affordances is key for this research, they provide a means of understanding, analyzing and evaluating the learning process through its varied dynamics, learning mechanisms, and outcomes. Within the sociocultural lens, affordances are defined as the properties of the environment that allow individuals to form relationships and carry out meaningful actions (Van Lier, 2000).

It follows that the implications of the ecological understanding of learning and development lies on the role and ability of the educator to provide opportunities for people to develop relationships with objects and actions and resources i.e., to interconnect knowledge between different types, contexts and timescales and contexts (Van Lier, 2004; 2011); in other words, to provide opportunities for the formation of relationships, that is, opportunities for interconnectedness between time-dispersed events, types and contexts of knowledge, which are always contextualized in and mediated by language.

The blended learning environment under investigation could be conceptualized as a cohort of communicative ecologies for learning to teach. The semiotic/communicative ecologies enable participants to make connections between different resources, social relations, peers and teachers, concepts and understandings. Following the rationale of ecology, this mode of conceptualization will help construct and support the argument that a blended environment of learning that merges face-to-face tutorial-type guided participation and independent-like (student-centred and student-led) computer-mediated participation could have enormous implications for learning through

connecting knowledge acquired through different participatory contexts and different resources. This implies that different worlds (ecologies) of people and knowledge can come together to construct meaning and new knowledge that is substantiated and sustained by their own experiences.

Summary

With the above, this research proposes a theoretical bricolage for the interpretation of the findings. It draws from the currently dominant theorizations on the development of human cognition. Underlying these theorizations, as elaborated in the above sections, is a social and individual dialectic as seen from the disciplines of psychology, linguistics and pedagogy. I consider that this bricolage and these particular structures, frames and concepts are essential to the understanding the learning process as it developed in this context and evoke valuable interdisciplinary insights into the pedagogical value of blended learning environments in ITE.

First, Vygotsky's sociocultural theory is used as the basis for the interpretation of findings to understand the learning process in this context of investigation. In its socioculturally-mediated and developmentally-oriented aspect, the Vygotskian theory serves the objective of this research to investigate the process of learning as "a process of change and transformation over time" (Cole, 1995: 191) in the Catalan cultural context of educational practice. The theory serves to emphasize: (1) the role of the mediation of diverse social agents present in the learning environment i.e., tutor, classmates, virtual peers, school teachers, young learners and cultural artefacts (i.e., various technologies used for carrying out educational practices) (2) the affordances of this setting as a valid mediating activity for quality ITE. Second, aspects of Bakhtinian and

Meadinian theory have been selected to further support the interpretative process. Third, Van Lier's articulation of principles for productive pedagogy drawing on Vygotsky and Bakhtin's theories are taken as backdrop to evaluate the effectiveness of this blended learning proposal and pinpoint specific pedagogical implications.

In this context, technology expanded the traditional boundaries and features of dialogue. It allowed for extended possibilities for social mediation and learning and diverse affording types of collaboration in the ZPD. Technological incorporation into social and professional life has generated new genres of language use e.g., digital/electronic implications for broadened mental functioning.

Accordingly, Parts III and IV illustrate how this dialectic was captured and enacted through dialogue, imbued with cultural meanings and intentions in human learning and development. The analysis in Part IV illustrates the process of social learning through participation in community. It illustrates how student-teachers engaged in interaction and meaning-making processes with various partners of diverse expertise on a variety of physical settings; and gradually developed understanding of the relationship between content and context, learned to act in contextually-relevant ways, integrate relevant information, and use it to plan and implement action.

Part III

Methodology

5. Methodological background



Overview

Chapter 5 reviews the literature on quality scientific research and explains the rationale underlying the methodological decisions of this research. First, it describes the theoretical premises and methodological principles that drive quantitative, qualitative and mixed-methods approaches, as well as criticisms that have been attributed to those approaches over the years. Second, it portrays the approach taken in this research.

Chapters 6 and 7 illustrate the implementation of these principles in the context of this research and reconstruct the data collection and analytical process. For this latter, Chapter 7 provides a guide into the codification processes that indicated salient themes for further extensive analysis and interpretation. Chapter 7 finishes with an evaluation of the quality of this research, according to the criteria established in the literature on scientific qualitative research.

5.1. Aligning objectives and methodology

The methodology was designed and implemented according to the general and specific objectives of the research. As indicated in the previous section, theoretically, this research is informed by socioconstructivist and dialogic foundations that consider learning as a dynamic activity of participation in social communities and not solely as an objectified entity or measurable/quantifiable production. The underlying stance to this approach is that a meticulous analysis of the complex and sequential developmental stages of the learning process, as they develop through interactions over time affords deeper understandings of the underlying ‘praxis’. Within these premises, this research sought to explore and trace the phenomenon of teacher cognition “in the making” (Barab, Hay, & Yagamata-Lynch, 2001:65). In the context of this research, this approach translates into an in-depth examination of sequentially-organized learning events across physical and multimodal environments, including computer-mediated communication, in order to extract pedagogical implications for contemporary teacher education programmes. In particular, this study can benefit programmes that aspire to integrate into the core pedagogy of teacher education.

In order to best explore the subjective experience of the study group of student-teachers, largely qualitative strategies and techniques for data collection and analysis were adopted. However, one concern in qualitative research which cannot be ignored is the need to ensure that the data indicates objective and measurable learning outcomes. Accordingly, the primary methodological objective was to accumulate sufficient empirical evidence to sustain an in-depth *in situ* exploration of the happenings, participants’ thoughts and actions and the relationship between these thoughts and actions (Forsythe, 1999), then seek patterns (Murtagh , 2007). This approach

helped us better discern the conditions in which blended teacher education designs can be conceptually and practically fruitful for teachers and teacher educators in the new digital and increasingly interconnected era.

In the following section, we outline the macro-ideological premises of positivistic and naturalistic ideological foundations underlying the quantitative-qualitative research paradigms and current trends in research that inform and contextualize the methodological and analytical decisions of this research.

5.2. An overview of positivistic and naturalistic ideological and methodological underpinnings of scientific research

Naturalistic inquiry implies no manipulation by the inquirer and second that the inquirer imposes no a priori units on the outcome.

Naturalistic investigation is therefore what the naturalistic investigator does.

Lincoln and Guba, 1985: 8

Historically, ideological and philosophical views and understandings about the construction of reality have imposed a divide between qualitative and quantitative research methodologies. Quantitative research methodologies for the doing of science are associated with positivistic ideas of reality and are characterized by the pursuit of general rules, and establishing relations of linear causality to justify phenomena in order to predict and control future course (Lincoln & Guba, 1985: 25-28). On the other hand, qualitative research is guided by the post-positivist, modernist or naturalistic paradigm, which is argued to propose a more humanistic approach to the understanding of reality.

The conceptualizations of the world that characterize qualitative research posit that there is no stable, tangible or discoverable reality “out there”; rather, the world consists of multiple realities that are being continuously constructed and reconstructed as new concepts become ‘known’ or known differently. These multiple realities are not conflictive, as they are situated in specific interactions. In this light, reality should be investigated holistically and historically (developmentally). Qualitative research denies the existence of universal criteria for what constitutes reality; rather research aims precisely at tracing and understanding reality as constructed by human subjects in relation to the external conditions in which they operate, through the manipulation of a variety of strategies and techniques. Very importantly, it emphasizes that human agency plays a fundamental role in constructing, perceiving and altering those realities, not as a linear causal relationship, but as a continuous mutual simultaneous shaping. Therefore, every pursuit of science carries the values of the investigator in the sense that there is no objective reality but a constant interrelation of the objective and the subjective. Thus, the core of doing research is to find ways to test a working hypothesis against the “Nature Itself” (Lincoln & Guba, 1985: 295). In this vein, the essence of any pursuit of scientific research in this paradigm is to devise appropriate ways to capture and understand phenomena. In this light, this research does not pretend to account for total relativity of truth, but rather, through the acknowledgement of the importance of contextualization of research, this study aims for a more inclusive and arguably a more objective understanding of the reality investigated.

Nonetheless, qualitative and quantitative methodologies have been both historically exalted for their contributions and criticized for their limitations. Drawing on Mercer's (2004) review of the strengths and weaknesses of quantitative and qualitative research methods, this research endeavours to bear in mind the following advantages and disadvantages of both methods for data

collection, analysis and interpretation. Taking these strengths and weaknesses as guidelines, the research methodology endeavours to do the following. (1) Take advantage of quantitative methods to provide more solid conclusions based on the measurement of frequencies of occurrence of patterns; (2) Exploit the main strength of qualitative research that lies in a close detailed analysis of carefully-transcribed episodes of talk and the fact that the actual talk remains as constant data throughout the analysis in a way that the reader is provided with real examples of talk; this renders the analysis more accessible, more relevant, more credible and possibly more identifiable by the reader; (3) be wary of the disadvantage of strictly quantitative research to work with pre-allocated and abstracted categorization schemes, devised prior to the actual empirical investigation; (4) be aware of the risks of treating organizing categories as distinct and mutually exclusive and losing sensitivity to what actually happens in the data, conditioning the surprise or discovery' element of research; (5) remain cognitive in the display of outcomes in the sense that the categories are reserved to the analyst and the reader is deprived the opportunity to engage and critically think about the processes underlying the presented outcomes.

While quantitative methods have been criticized for failing to capture the dynamic nature of talk through which the phenomena they are investigating is constructed, the qualitative researcher manipulates diverse methods to unravel reality as a complex set of mental human constructions and remains open to the "unexpected". Naturalistic proponents portray qualitative inquiry as an art (Taylor & Bogdan, 2000). In this sense, qualitative research can be understood as a paradigm involving an activity of bricolage of methods and practices (Denzin & Lincoln, 2000), lending themselves to "ethnographic, qualitative, phenomenological, subjective, case study, hermeneutic and humanistic research practices" (Lincoln & Guba, 1985: 7; see also Guba & Lincoln, 1994). In qualitative research, the researcher's involvement and creativity are acknowledged and valued as

important/essential for the obtaining of conclusions. Unlike the positivist tradition which aims at objectivity, qualitative research is understood as a “site of multiple interpretative practices” (ibid: 60) and the outcome of qualitative investigation presents a “lucid storyline” (p. 292) which reflects a co-construction of participants and researcher’s perceived reality (Dörnyei, 2007: 293).

While the quantitative researcher seeks to prove *a priori* causal relationships between isolated variables, the qualitative researcher follows a less refined research methodology (Taylor & Bogdan, 2000) and does not rely on standardized methods as other positivist traditions, but is allowed relative freedom to define an appropriate methodology for conducting their research which is in direct accordance to their research questions and objectives. As Denzin and Lincoln (2000: 2) put it:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of meanings people bring to them.

In the elusive idea of “objective” reality and resulting absence of a ‘black and/or white’ ideal methodology for doing research, we defend that the essence of the qualitative-quantitative debate lies in the acknowledgement that the two paradigms have different priorities, different goals and different starting points and procedures, which makes any comparison or criticism “unfair and prejudiced” (Duff, 2006; Dörnyei, 2007). Literature documents that qualitative research is

increasingly gaining ground in social and educational sciences (Noblit, 1984; Miles & Huberman, 1994; Dörnyei, 2007), while remarking the still relative dominance of cognitive approaches to learning that favour quantitative examinations of products i.e., significant changes that occur across temporal stages and exposure to a different inputs (Boyle, While, & Boyle, 2004; Hai & Bee, 2006).

5.3. Refuting polarity: the mixed-methods approach to scientific research

Nonetheless, we acknowledge that one-sided approaches to scientific research bear inherent risks for objectivity, therefore this research propounds adopting a mixed-methods methodology. Dörnyei (2007) proposes multiple taxonomies to describe how quantitative and qualitative components can be combined and integrated into a single research design. Although there is not a prescribed set of processes or methods and the weight and priority assigned to qualitative and quantitative components can vary, researchers can negotiate the extent in which they employ quantitative and qualitative methods (see p. 169 for further discussion and symbolization of possible typologies and taxonomies for mixed methods research).

Currently, the deployment of mixed-method designs, what has been called, “principled-mixing” of methods features as the alternative to bridging the limitations and perceived sterility of compartmentalized quantitative or qualitative research. Mixed-methods designs have been identified as the pragmatist approach to doing research that aspires to the need of the times (Dörnyei, 2007; Johnson & Onwuegbuzie, 2004; Mercer, 2004). As several researchers have pointed out, the mixed-methods research approach appeals more to knowledge acquisition practices that are not so neatly categorized but complex, interdisciplinary and distributed (Harden & Thomas, 2010; Mercer, 2010; Tashakkori & Teddie, 2003; Tashakkori & Teddlie, 1998).

Mixed-methods research approaches are facilitated by current developments in the world of information technologies, especially in the application of data collection, e.g. Computer Assisted Qualitative Data Analysis Software (CAQDAS). Qualitative researchers have seen CAQDAS as a means of bridging the quantitative and qualitative dichotomy and enhance validity in qualitative research through triangulation of various methods and data (Denzin, 1989; Mercer, 2004; Rocco, Bliss, Callagher, & Perez-Prado, 2003; Weitzman, 2000).

Quality criteria and the ways in which the two research traditions approach the concepts of validity and reliability has been another major issue exacerbating the quantitative/qualitative polarity. On the one hand, quantitative studies are said to use standardized clear-cut methods and procedures in order to achieve objectivity and generalizability of results in the form of universal laws. Thus, it has sometimes been labelled “hard quantifiable and thus objective research”. On the other hand, qualitative researchers focus their studies on small samples of data and start by investigating the particularities of the context that lead to particular actions and behaviours in order to develop theory grounded on the data. As such, qualitative research has been called “soft inherently subjective quality-based” and cited as incompatible methodologies with scientific research (Guba & Lincoln, 1994; Auerbach & Silverstein, 2003). In their defence, qualitative researchers emphasize that objective constructs such as ideologies, values, axiologies are brought about through a dialectic reconstruction between micro and macro in which the macro i.e., metapragmatic models of learning shapes the micro and the micro constantly reshapes the macro (Wortham, 2006). This is the idea of process and constructing/developing theory within the qualitative paradigm. Auerbach and Silverstein (2003: 414) state that “objectivism that does not take into account subjectivity can be nothing but elusive since the very nature of reality is subjective and diverse”. On the same issue, Strauss and Corbin (1998) argue that “theory derived

from data is more likely to resemble reality than is theory derived by putting together a series of concepts based on experience or solely through speculation, (how one thinks things ought to work)” (p.12).

5.4. Research method: Ethnography as the methodological approach

In its qualitative component, the methodological approach of this study can be best described as ethnographic multiple case study (Duff, 2006; Dörnyei, 2007) of the contemporary phenomenon of teacher professionalization through multimodal (blended) participatory learning environments.

Ethnography features as promising naturalistic methodology in social sciences. It is seen as “an approach for apprehending and ultimately comprehending social reality” and the “original way of knowing in social sciences” since understanding is unique and context-bound (Noblit, 1984; see Taylor & Bogdan, 2000) for a historical note on the emergence and acceptance of qualitative methods in the fields of anthropology and sociology). The importance of ethnography has been stressed in various fields of research, including Foreign Language Education. Researchers increasingly stress the value of using ethnography and discourse analysis in facilitating an in-depth understanding of the lived experience of a population in order to devise appropriate courses of action about a phenomenon (Beckmann & Langer, 2005; Elliot & Jankel-Elliott, 2002). According to Forsythe (1999), appropriately-conducted ethnography restrains overgeneralizations and works against the assumption that if individuals do something once or twice they will always do it; this is a common tendency in natural sciences where research aims at finding tendencies and causes “ironing out individual idiosyncratic differences” (Dörnyei, 2007: 126). As this latter author posits, social sciences are not like natural sciences in which a tendency can be isolated and generalized by acquiring a large enough sample and should not be treated as such. Social sciences

deal with phenomena experienced by distinct individuals where distinct idiosyncrasies matter and are relevant to the understanding of the phenomenon at hand; therefore the qualitative aspect cannot be neglected (see also Guba & Lincoln, 1994).

Within these premises, ethnography involves a long process, requiring the ethnographer to spend much time with a group of people (Forsythe, 1999) and relies on a particular type of data compiled through participant-observation and notes from the field. In applied linguistics, including education, ethnographic studies have been acknowledged as “productive and highly influential” for researching change in complex phenomena over time” (Van Lier, 2005: 195). The aim of ethnographic case studies is “to understand the complexity and dynamic nature of the particular entity and to make systematic connections among experiences, behaviours, and relevant features of the context (Johnson, 1992) by collecting empirical evidence on a specific phenomenon over long periods of time. Accordingly, the adoption of this approach meets the aims and objectives of this research, which is to undertake the complexity of the process of initial teacher professionalization in its natural settings through the eyes of three focal student-teachers (whose selection will be explained further below). Opting for a multiple case study over single case study, we make use of the comparative element of outcomes across cases rather than within a single case, which increases general understanding of the phenomenon at hand and thus helps ensure the validity of conclusions (Auerbach & Silverstein, 2003; Dörnyei, 2007).

In this research, the ethnographic methodology was operationalized as a case study of a group of student-teachers. The process-product focus of this research in regards to teacher professionalization, grounded on a large and diverse corpus of data, facilitated triangulation of findings and interpretations by providing the opportunity for constant comparison between

outcomes and processes. (Copious documentations of participants' final outcomes were examined alongside data that showed the natural development of the process underlying the materialization of these outcomes).

As an ethnographic case study, the priority of this research is not to test pre-determined hypotheses regarding teacher cognition, nor to measure teacher cognition as quantifiable product but to question how the participants come to identify themselves as teachers and understand teacher cognition related to the current teaching methods (e.g. Communicative Language Teaching, or CLT) through the teachers' personal experiences (Auerbach & Silverstein, 2003). In line with quality criteria for ethnographic case study research, multiple sets of data are required to unravel "the mechanisms by which a phenomenon is brought to being, sustained or changed" and to ensure the validity of results (Yin, 2003). In its mixed-methods component, the use of CAQDAS aided the analytical process; specifically, the NVIVO8 software is used to quantitatively determine the saliency of specific findings.

On a methodological and analytical level, this is an exploratory study (Stebbins, 2001) of the process and outcomes of teacher professionalization in blended environments. The subsequent analysis aims at developing new theory emerging from the data. One such exploratory methodology is Grounded Theory (GT), originating in the work of Glaser and Strauss (1967). In its more recent form, GT, its essence, premises and importance/value in qualitative research is depicted in Charmaz' (2006) work. The fact that it departs from an emic perspective of reading and exploring the data and its attention to detail and (temporal) order of events through various cycles of coding places GT as the most appropriate methodology for both data collection and analysis for the purposes of this research. The decision for this methodology for data collection

and analysis was based on the acknowledgement that it provided a pragmatic typology of the complex and strenuous process involved in doing qualitative research: coding cycles, code development (as will be explained in Chapter 7).

5.5. Criteria for validity, reliability and scientific rigor in mixed-methods approach

According to Dörnyei, (2007: 55), in qualitative research, the criteria for validity are “built-in” the trajectory of research and are played out through a “thick description” of the targeted phenomenon, the data collection and analytical process or, as Lincoln and Guba (1985: 294) put it, the process of investigation is “self-justifying”. In this light, the truth value depends on the transparency of the process, techniques and axioms by which the researcher abides during the investigation and the ability of the researcher to demonstrate logical correlations between process outcomes, data and interpretations. i.e., coding, categorization schemes, agreement between observers/analysts regarding coding and categorization procedures. The truth value also depends upon triangulation from multiple sources and methods of data collection (Denzin, 1989). Qualitative researchers ensure the validity of the investigation by remaining close to the empirical world for a sustained period of time during which they examine people and scenes in relation to context (Lincoln & Guba, 1985; Taylor & Bogdan, 1987) and perform constant reliability checks of various sub-processes.; The results are arrived at through an iterative process of going back and forth between the data and the analysis until a “goodness of fit” is achieved (Dörnyei, 2007: 55). As discussed previously, the issue of generalizability of results as evidence of objective quality research has generated great discussions and has been seen as one of the main drawbacks of qualitative research. In their defence, proponents of the case study methodology portray that this

type of qualitative research aims at theoretical or analytic generalization rather than generalizing specific results in numbers (Dörnyei, 2007; Duff, 2008). Factual accuracy lies the researchers' account of the happenings (Maxwell, 1992) and plants the seeds for theoretical generalization in the form of generation and replicability of ideas and concepts in other contexts, institutions. Factual accuracy does not lie in particularities in terms of numbers per se but aims to add to existing funds of knowledge around a specific phenomenon. As Dörnyei posits, it is not the particulars of the study that are generalized but the ideas and the process (2007: 59); in qualitative research generalization comes about through development of theory, in which case we are talking about analytic generalization of theoretical models and adding to the existing "funds of knowledge" in the field of research (Yin, 2003). Researchers also argue that, in this sense, the two paradigms may not be so far away from each other in their understanding of valid and reliable research (see Maxwell, 1992; Dörnyei, 2007).

Thus, exact replicability in other contexts becomes very hard, if not impossible to achieve by using either quantitative or qualitative methodologies. In qualitative research, Denzin (1989) cautions that objective reality will never be captured, but makes clear that any interpretive study aims at an in-depth understanding of a phenomenon and not (perfect) validity (also see Fuchs (2005). Maxwell (1992) argues that qualitative validity lies on descriptive, interpretive, theoretical, and evaluative validity and generalizability.

6. Reconstruction of the research methodology

Overview

Chapter 5 conveyed the theoretical foundations and methodological premises underlying the decisions made in this research and which served as a guide for the implementation process of data collection, analysis and interpretative process. This chapter describes the operationalisation of the ethnographic guidelines followed as they derive from my experience as investigator. This description serves as an “audit trail” of people, roles and tools (Dörnyei, 2007) aiming at enhancing the credibility of the research and as basis for further empirical testing and transferability of outcomes (Lincoln & Guba, 1985).

6.1. Data collection: techniques and processes

In ethnography, the technique and process of participant observation allows for an *in situ* vision of the particularities of the different conducts and behaviours of the participants involved. This active and longitudinal involvement is referred to as an “acculturation process” which “allows the researcher to move from being an “outsider” to acquiring sufficient “considerable insider experience” in order to best carry out the investigation (Forsythe, 1999: 130). In this research, acculturation into the practices of a new culture translates into generating a “wide-angle view”

and “better sense of the big picture” of the teacher professionalization and the larger sociocultural context in which it took place i.e., other participants and their practices, other idiosyncrasies involved in the process, verbal and non-verbal reactions (Dufon, 2002: 46). Specifically, this research sought to understand the process of teachers’ professionalization through longitudinal multimodal interactions.

Adopting this ethnographic vision, this dissertation documents a one-year timeframe of data collection and an overall of 4 years of living experience in Barcelona and active involvement in language and teacher education sites. By doing this, the data collection covered the parameters of participants, settings, events, multimodal processes in classroom and naturalistic settings such as the campus, informal conversations outside the classroom in order to maximize learning about the phenomenon at hand.

This was achieved through prolonged participant-observation at multiple settings in order to achieve acculturation into the “world” of this group of student-teachers and the culture of learning to teach. Participant-observation was complemented by field note diary, along with data collection. Specifically, I, as the researcher, conducted participant-observation in all university tutorials and engaged in field-note taking during the academic year 2009-2010. This technique fostered interaction between the researcher and the participants, held rich and valuable insights on the diverse sociocultural dynamics, the history of the participants, group dynamics, unspoken tensions, and interactions between actors, resources, and the environment (Barab, Hay & Yagamata-Lynch, 2001; Lincoln & Guba, 1985) and generated part of the focal data for this research (audiovisual recordings of tutorial sessions). Further participation in related activities

i.e., school implementations of didactic materials, informal conversations with participants generated an array of triangulation data to back up the interpretative process.

In a complex situation such as the blended learning environment, online communication (where research is limited) adds new dimensions to the role of “human observers” (Barab, Hay & Yagamata-Lynch, 2001). The participants sent their transcripts of online meetings to me by email and related details on the development of those meetings during class time and informal meetings, thus enabling me as a ‘partial’ observer.

The following sub-section provides details about my trajectory and roles as researcher and participant-observer in this context. It includes the chronology of data collection and types of data compiled to contextualize and outlines specifically why this method of data collection is described as ethnographic, yet naturalistic observation. The observation was naturalistic in the sense that I did not participate in the development of events or instruction of the content; rather, I observed the development as it took place in the real setting of the classroom between the tutor and the student-teachers (as will be explained in the section below). At the same time, the approach taken is ethnographic in the sense that I asked questions to the tutor about certain aspects of the instruction, listened to student-teachers’ comments and had informal conversations with the student-teachers in out of class time at their own initiative (also explained in the section below). Finally, the ethnographic data is presented in the format of a storyline of events (Creswell, 1998).

6.1.1. My trajectory as participant-observer

At the beginning, I did not directly participate in the development of the course neither as teacher or student-teacher, although I did start as researcher by setting up focal group interviews with the

study participants. These focal group discussions began by asking questions about their expectations of the course, their anxieties and goals for the upcoming practicum year (they were held at the very beginning of the 1st term of the academic year). I went into the classroom with an open mind, no predetermined foci or categories and no specific focus and concrete observation categories, which is akin to qualitative approaches. As a novice teacher myself with a learner background in grammar-based language instruction, I set out to explore “uncharted territories” (Dörnyei, 2007: 132) through immersion into the world of technology-mediated communication-based and competency-oriented foreign language learning. For me, it was exceptionally important to examine how people develop knowledge about the overt i.e., explicitly intended knowledge, skills and competences; as well as the “hidden curriculum” underlying teaching through this blended mode of participation, i.e., by-products of education not openly intended such as norms, values, feelings (Jackson, 1990).

The participant-observation largely took place at the university and was complemented by school visits (I was given permission to accompany the university tutor when she visited the student-teachers during their internship) and other class observations at the university (TEFL methods class).

Arguably, building and maintaining trust is an important pillar in qualitative research, which takes place throughout the observation period. Planting the seeds of trust between researchers and participants – especially in a context where academic achievement is involved, has a lot to do with respecting ethical issues. I was introduced to the student-teachers as a PhD student doing research in teacher education but not as a co-teacher educator. I disclosed myself as a novice teacher from a different sociocultural and educational background, also immersed in the process

of learning to teach and experimenting with new technologies. I shared my intentions to observe and collect video and audio data from the practicum sessions for my research purposes which, as the tutor and I explained, were aimed at reflection and improvement of the design of the course and were not related to any academic qualifications pertaining to the student-teachers. We also ensured them that the research would also respect their anonymity by using pseudonyms at all stages of the research and presentation of results. In this light, the student-teachers signed a consent form for data collection throughout the course.

My role gradually changed from strictly an observer and PhD student to a fellow student-teacher, supporter, assistant and even social acquaintance and confidant. The participants themselves gradually assigned these qualities to me, which became relevant in formal and less formal discussions that I had with them in and out-of-class time, and which I documented in my research diary. Their consideration of me as a fellow student “willing to commit to the behavioural mores of the group” (Johnson, 1975 as cited in Guba & Lincoln, 1985: 256) supported the feeling of trust between researcher and participants and revealed aspects of the student-teachers’ personalities, which in turn provided fundamental insights to understanding, interpreting and appreciating these student-teachers’ development.

6.1.2. Technical considerations

One implication of audiovisual data collection methods is known as the observer’s effect, that is, their incorporation in the investigation of phenomena has been associated with a degree of bias in regards to the neutrality of the data gathered. In other words, the existence of a camera on site will inevitably affect the interaction itself, however, as it has been reiterated in the theoretical framework, qualitative research is interested in the interaction *in situ*, and therefore the observer

and camera are considered part of the setting and context. Furthermore, audiovisual recordings have become mainstream resources for doing qualitative research and unquestionably useful for providing “fine-grained information on the moment-by-moment conduct of people in social interaction” (Erickson, 2006: 177) and numerous principles and considerations have been proposed to mitigate the effect of the camera or the audiorecorder or the researcher themselves. In this research context, time seemed to decrease the effect of the camera and the recording devices to the point that they were considered parts of interaction, maybe even a motivational aspect of the experience. Specifically, the first two tutorials were videorecorded using a manual tripod-based camera. From the third tutorial onwards, and following changes in classroom arrangements, the camera was placed at a fixed location. There was no moving around to disturb the development of the class and I, as the researcher, took a seat close to the participants in order to be perceived as part of the group while compiling notes from the field. Gradually, the participants came to accept both the camera and the 2 audiorecorders as part of the setting rather than a threat. Very interestingly, they seemed to develop a sense of responsibility about whether these recording devices were working properly in order to not jeopardize the research. For instance, the camera was activated through a Windows Media programme that was installed on the same computer that the participants used to upload their PowerPoint presentations and vignettes. On several occasions, the recordings show that the participants made sure that they did not stop the camera while uploading their vignettes and PowerPoints on the computer, that the camera was on and recording as they presented and that they could see themselves on the camera before they started the presentations. A characteristic capture of this development took place in beginnings of November. One of the student-teachers accidentally stopped the camera and was about to start his

presentation when the others interrupted him and pointed out that the camera was not recording and that the class could not go on until the camera was back on.

6.2. Data collection: Chronology, process and type of data compiled

Collecting multiple sources of data helped establish a “chain of evidence” (Yin, 2003: 34) around a specific phenomenon and in turn to construct validity of the interpretative process of this investigation. The following sub-sections relay the data collection process, the chronology of the procedures, instruments, and the value these held for the research.

6.2.1. Audiovisual data

From Practicum course: The observation period began in October 2009 and lasted for the whole academic year. First, pre-questionnaires were distributed to the student-teachers; these questionnaires comprised 3 open-ended questions asking the participants to state 3 objectives they would try to accomplish at the level of the university tutorials, school and individual professional formation (see Appendix 2).

Second, interview data from 2 small groups; first group comprising 3 student-teachers and researcher and second group 4 student-teachers respectively were collected. These small-group interviews were conducted for mainly 3 reasons:

1. Encourage a first acquaintance of the student-teachers and develop group coherence and cohesion by relating experiences, concerns and mutual concerns.
2. Allow them to recall, reflect, and synthesize impactful past experiences with practicum and experiences during the past 2 years of university education and school observation and clarify weaknesses, goals and expectations.

3. Provide grounds to specify relevant research questions

These interviews were audiorecorded, transcribed by the researcher and are included in the analysis. The university tutorials provided an excellent opportunity for ‘naturalistic observation’ of the process of teacher professionalization. As I was not a teacher educator, I was able to observe the process as it was constructed naturally and *in situ* by the university tutor and student-teachers. In this light, all the face-to-face sessions at the university, 1st and 2nd semester, were video and audiorecorded on a weekly basis.

During the year, the student-teachers, apart from designing didactic material for implementation, were also involved in vignette presentations that consisted in video recordings of specific aspects of school experience and individual Action Research tasks. Those are also included in the overall data corpus. Videos from the intensive period taken by the researcher during the visits to the school were not included in the analysis but were used for triangulation purposes.

The process of conceptualizing and designing didactic material, supported by tutor and peer feedback was distributed across 7 tutorial sessions. Feedback sessions consisted of two rounds per student-teacher, that is to say each student-teacher presented their teaching designs twice, as a first draft (no preliminary feedback, only oral feedback following the presentation of ideas) and then a second draft (following class and virtual feedback), leading to a third round of feedback in class and creation of a third and final planning. These sessions were closely observed and audio and video recorded. The overall set of audiovisual data was taken from 22 sessions of 1.5 hours, adding up to a total of 33 hours of audiovisual data.

(More details about the physical arrangement, requirements and setting up of the practicum tutorials in relation to university curriculum objectives are provided in Chapter 8).

From Teaching Methods course: As the data collection process moved along, it became relevant and necessary to include data from the Teaching Methods class since parts of this latter course was directly related with the practicum course and thus the purposes and objectives of the dissertation.

The Teaching Methods class was focused on lecture- and practice-based instruction of the theoretical and pedagogical principles underlying CL/CB teaching. This class discussed teaching specific methodologies on planning, design and implementation of didactic material. A special component of this class was simulated teaching (or “microteaching”, as the participants commonly called it) during which the student-teachers had to apply their knowledge and understandings of the premises taught to create and implement a short (half-hour) lesson plan in the presence of their class peers. The class peers used their knowledge of the field and imagination to act as ‘students’ of the specific age group of learners targeted by the practicing teacher. At the end of this simulation, the class made comments on the development and learning potential of this planning and in turn shared feedback on the positive and negative aspects of their planning and suggestions about how it would work in a real classroom practice.

It is also important to mention that the Methods class was attended by all final year student-teachers at the university (60 in total) and not only the 7 student-teachers who participated in the practicum under investigation. Given that the same tutor of the practicum course was also teaching the Methods course, it was possible to tag along and gather data for the 3 focal student-teachers. This said, data from the microteaching class include: (1) video and audio recordings of

simulated teaching practices involving telecollaboration and (2) and oral presentations of the implementation of the podcasts, as well as respective final text-based reflections of these sessions. The 33 practicum hours were complemented by 4 hours of microteaching recordings, adding up to approximately 40 hours of video/audio data.

From school visits: Videos from the implementation period of the teaching sequences were also collected. During the intensive period (January-February 2010) during which the student-teachers implemented their teaching at the school, the researcher along with the university tutor visited 3 of the student-teachers at school sites and observed the implementation period of individual student-teachers. There they discussed their experiences, shared their anxieties, showed their workplace and “their kids” (student-teachers’ own words).

6.2.2. Text-based data

Online chats: In regards to the virtual exchange, chat transcripts were collected by email. Given that the participants carried out the online exchange in out of class time, mainly at home, participant observation could not be carried out without intruding on the participants’ privacy. Although online data were focal data for this research, it was not the aim of research to study Human-Computer interaction so the absence of face-to-face presence of the researcher did not affect/compromise the data collection. Student-teachers were asked to save their online interactions with their UIUC partners and then email them to the tutor and the researcher. These transcripts were taken as “natural protocols” of students efforts in making sense of events, structuring of their physical and social environment (Roth, 1996).

School diaries: Throughout the year, the student-teachers documented school experiences that had an impact on them and recorded their teaching implementations. During the course, the

student-teachers were asked to keep personal journals and reflections about teaching practices at the school. At the end of the year, they were asked to incorporate all this material in a final e-portfolio in a wiki format. Participants' end-of-year self-evaluations and reflections, written and oral presentations are utilized as symbolic representations of the professional socialization process that occurred during the academic formation and inform concluding arguments.

Wiki self-reflections: The focal data itself provided triangulation opportunities since the student-teachers documented their reflections of the learning process in their end-of-year portfolio. The overall content of the wikis was organized across the following sections:

- Minutes of each tutorial session, kept by the participants, which corroborated and added to the researcher's fieldnotes and interpretation of these findings and thus increased the ethnographic value of this research and interpretation, by contributing the student-teachers' own perceptions of the happenings.
- School diaries that consisted of self-documented written discussion of the in-school experiences.
- Reflections from their online interactions and teaching implementations (teaching & podcast-based sequence).
- Evaluations of experience that consisted of revisiting and reflecting on the processes and contributions of online chats and university sessions towards their own professionalization.
- Self-evaluations of competences based on a preliminary self-ranking (using a summary taken from the European Portfolio of Student-Teacher of Languages and subsequent re-evaluations of teaching competence acquisition).

Ethnographic registers

Ethnographic registers or researcher’s field diaries were kept to allow a thick description of the learning environment at the university, as well as participants’ behaviour in the week-to-week university practices, allowing for a deep knowledge of the emerging dynamics (Serra, 2004). Ethnographic information was registered at school (during implementation of teaching sequences), on campus (classroom and outside), and in Barcelona (during conferences and seminars on the issue at hand).

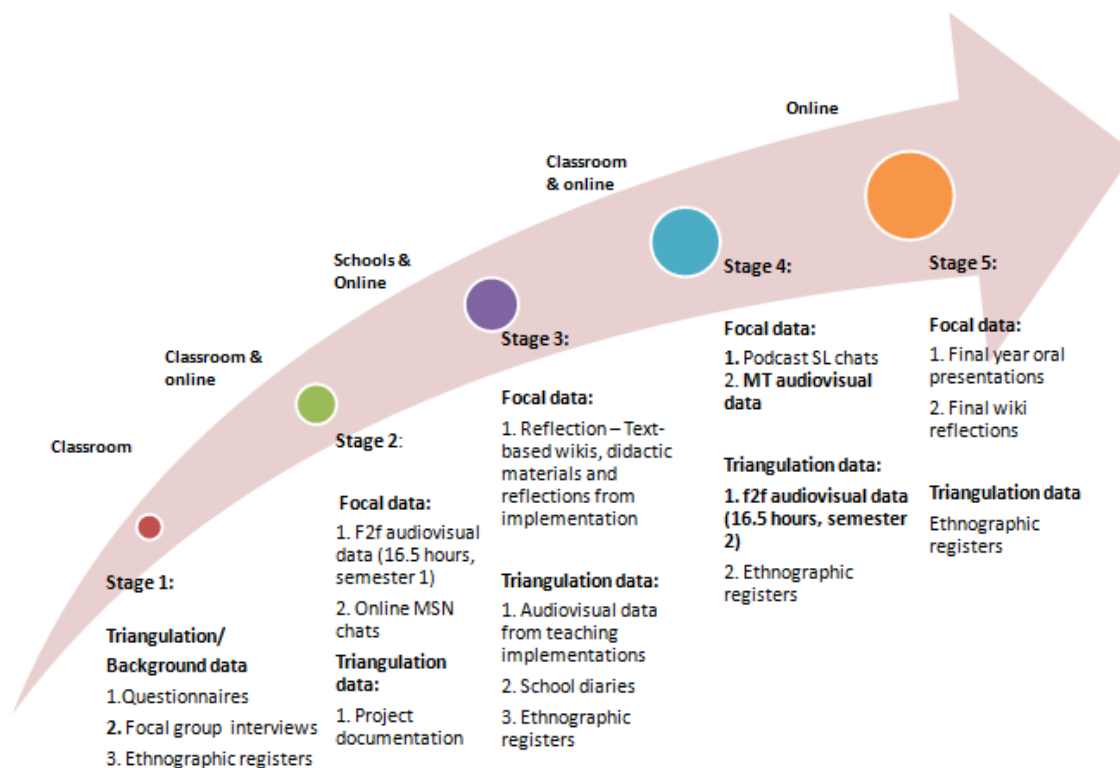


Figure 1: Representation of the data collection process and outcomes

Fig.1 illustrates the progression and constant accumulation of data in and across multimodal spatially and temporally distinct settings. Each stage of data collection generated gradually more information, which facilitated a sequential understanding of the teacher professionalization process: From focal interviews allowing an initial understanding of

the student-teachers' histories as learners, the needs and goals that they projected for themselves at the beginning of the course (stage 1) to their perceptions of knowledge, skills and competences as they themselves perceived them at the end of the course (stage 5). Understandings from previous stages were used to determine, triangulate and interpret the meaning, relevance and learning value of every new data gathered.

Because ethnographic study implies that the researcher is 'embedded' in the environment, moments for 'key' recordings of behaviour may be spontaneous and even become part of a registered 'chain of events' that go beyond the previously planned research interactions.

To exemplify how this occurred in this particular study, I list several 'events'.

One example of relevant register took place on campus in the first session of the second semester. Prior to this event, the tutor had suggested that they used Dropbox in order to share documents with the American peers and tutors and suggested that they install the software on their computers for the next time. On our way out of the classroom, two student-teachers approached me for specific information about Dropbox, sharing their personal anxieties and fears in regards to the deployment of this new technology that they were not familiar with. Natalia (focal student in this investigation) for example, became nervous when Dropbox was first introduced and anxious to find out what it represented exactly and how she could install it on her computer. A small group was soon formed with Natalia asking the questions and Montse taking notes. I tried to reassure them that working with Dropbox was very easy to use, that it worked more or less like My Documents only that the Dropbox could provide online sharing.

Then, Natalia had more to say about her relationship with technology. Identifying herself as a "technophobe" she said that in her everyday life she had no practical contact with computers; all the more, she said that her husband dealt with everything related to technology since he was "informático" (computer technician) and that the computer they had at home was old and could

not support environments such as Second Life. I shared her concern, we both laughed as we walked to the train station. Towards the end of the course, Natalia proudly reminded me of those conversations. She emphasized her development and asserted how much she had improved in several aspects, including technologies and working with others without feeling attacked, which she considered of utmost important for her. She could barely believe it herself, as she said: “Do you remember how I was at the beginning? I couldn’t even understand all that Melinda (teacher educator) was saying in English and now I’m going to England to teach children”.

At the end of the year, Anaïs (focal student in this investigation) invited me to their graduation ceremony where I watched and listened to them confidently and proudly receive their degree, ready to spread their wings as legitimate teacher professionals. At the end of the ceremony, she shared her future plans to reinforce her knowledge of teaching by taking summer classes and describing her current job as supporter of learning at the school where she did her practice teaching.

Given the critical role of the researcher in the collection and interpretation of data in qualitative research, such conversations were fundamental for me in many ways: evidently they allowed me to delve more into, discover and understand the context of language learning and learning to teach in Catalunya and also helped me to reciprocate the student-teachers own concerns about teaching but most importantly they revealed aspects of the student-teachers’ personalities that in turn provided relevant and fundamental insights in order to understand, interpret and appreciate these student-teachers’ development.

6.2.3. More data sources

The course documentation was also collected and were used for triangulation purposes to ensure the truthfulness of the findings and arguments of this research; This documentation comprised guidelines and instructions that were given throughout the course e.g. examples of questions for note-taking, for reflection, for diary keeping, and instructions for using the technology, portfolio format proposed in the course i.e., Voicethread, Dropbox and Second Life, a summary of the EPOSTL criteria for legitimate professional teacher development skills and competencies.

This latter had a manifold purpose: (1) Contextualize teacher training in the European context, (2) raise the student-teachers awareness of the skills, competencies, and roles they were required to master by allowing them to first 'discover' the requirements and this way set (more) specific goals (mediating means to movement from everyday concepts to scientific), (3) reflective tool (for individual monitoring of progress during the course also an incentive for them to learn in alignment with European criteria for teaching and learning, and (4) facilitate self-reflection of the progress made at the end of the course. Also, the EPOSTL summary (see Appendix 2) and student-teachers' rankings facilitated some first 'inside-view' of how they prioritized the objective of becoming a primary-school FL teacher and became a tool in making a first 'dive' into the data. In turn, this set of data allowed me to make comparisons between initial objectives and expectations and final output in relation to the process of learning and teacher professionalization. I used these rankings as a starting point for this research to facilitate some initial insights into the process of activity and individual conceptualizations and approaches to teaching English as a FL to primary education, and devise the descriptors of the teacher learning activity in this specific context. Regarding technology, they considered that network-based environments should be

integrated in classroom practices and interactions and management of tasks in order to enhance project-based learning and collaborative activities and thus critical thinking and creative expression and knowledge creation. However, at this point the level of self-reflection associated with each of them was minimal. It became significant and scientifically understood when they retook these descriptors at the end of the year to evaluate their learning and development and related concrete examples of experience.

6.3. Review of relevant documents and literature sources

The rationale of an ethnographic process is that the use of a predefined theoretical framework imposes an a priori ‘world’ of theory, abstract concepts and interpretations that may not be the most adequate for interpreting the reality at hand. Approaches that are not ‘embedded’ might deprive the opportunity of the element of the “unexpected”, an important qualitative premise described above. Given that reality is complex, always constructed in relation to social and cultural contexts, and susceptible to multiple possible interpretations, the absence of logical correlations between field observations and theory could result in *a priori* interpretations of what has not yet been studied. In this light constructing the theoretical framework prior to the actual data analysis becomes nonsensical (Martinez, 2006). In qualitative research, theoretical foundations should act as an ‘epistemological filter’ against which to compare field observations in order to compare and evaluate multiple possible interpretations.

Finding literature implied a constant iterative and recursive process, in line with the premises and procedures of Grounded Theory and other qualitative approaches to investigation and analysis, as well as with the complexity of investigating the reality at hand.

At the beginning, this review consisted in a repertoire of studies and official documentation on teacher education, identified skills and competences required according to the needs of the times (European Portfolio for Student-Teachers of Language, the Multiliteracies framework and international policies illustrating the vision of current education, (New London Group, 1996), as well as current literature at international level where technology-integrated TE practices were implemented. This literature review allowed further contextualizing of the design, methodology and findings of this research on the larger international educational context, as the data collection process moved forward and themes began to emerge.

The data collection process ran simultaneously with this literature review; and the findings that emerged from this data collection led to further reading and immersion into the theories of cultural-historical psychology, symbolic interactionism, and dialogism. Immersion signified a process of creation; maturation and concretion of the theoretical framework, which enabled carrying out a contextualized analysis, grounded on the data, which will be detailed in the following chapter of this part.

6.4. Data sampling: Pragmatic considerations and contextual contingencies

This extensive data collection process and procedures of all 7 student-teachers who were enrolled in the degree of Mestre de Llengua Estrangera at the UAB facilitated a surplus of data to help me to conduct a representative analysis which provided a holistic view of the context, processes, and outcomes. Considering Dörnyei's (2007) guidelines for sufficient data collection for ethnographic research, this ensures that one can be "empirically confident" about answering the research

questions (p.127) through extensive participant observation, data collection and quality of data from multiple learning settings.

Once the final large data sample had been gathered, some pragmatic considerations needed to be taken into account in order to remain on top of all the details of the learning behaviours, structure and organization of events and processes, maintain the longitudinal character of the research and at the same time safeguard the credibility of research.

First, I distinguished between information (to be used as ethnographic and triangulation purposes) and data (focal data to be formally analyzed). Second, I isolated the professionalization process which had occurred specifically in the blended component (reflected in the two tasks that involved computer-mediated and face-to-face interaction; i.e., teaching sequence and podcast design) and not the other tasks which were also carried out during the practicum.

The third aim of this research was to get as representative an account as possible of the blended professionalization process. This required selecting focal student-teachers who could be followed across multimodal interactions. This implied taking into account contextual contingencies that produced certain attrition during the data collection period e.g., students engaging in voice-chats with American peers who ended up submitting a summary of the meetings instead of recordings due to technological deficiencies. This said, the “criterion-based” sampling scheme (Dörnyei, 2007: 128) is detailed in the next section.

6.5. Criteria for participant selection

Face-to-face recordings, online chats and wikis were focal data in the analysis. This included the video footage and produced textual artefacts e.g., teaching designs, podcasts and follow up

exercises, and wiki reports. This data corpus enabled construing the teacher professionalization process through the conversational and cognitive work done by individuals, groups, and the classroom community across time and space (Roth, 1996). The principal selection criterion for participant inclusion was full representation across the domains of data sets. Thus the final sample includes data regarding the three student-teachers of whom we had complete documented practices of their teaching professionalization throughout the course. (More detailed information about the participants are given in the Analysis part).

The data collected on these 3 participants cover whole events i.e., planning of didactic and podcast-based sequence from beginning to end and complete sequences of activities within events, thereby providing realistic and valid ethnographic research (Dufon, 2002). Specifically, all three complied with and produced complete data on all the parameters of learning conceptualized in the blended instructional design thus ensuring a complete documentation of systematic interactional activity that extended across multiple learning spheres i.e., university, online and at the practicum school. In addition, the data collected on these three focal student-teachers included activity in other courses at the university, which was directly related to the practicum (microteaching during the Methodology course), and opinions/comments gathered through informal meetings with them in out of class time concerning issues at hand that emerged during the course over a year-long timeframe. This allowed a thick contextualization, interpretation, and evaluation of outcomes, in line with the nature and processes of the ethnographic methodology.

Thus, these three cases represent critical, significant and paradigmatic examples for this research and lend themselves to variation in the sense that they portray interesting and different idiosyncrasies and individual characteristics e.g. language proficiency, insecurity with decision to

pursue a career in foreign language teaching, different attitudes to technology/approaches to educational technology, different learner backgrounds, multiple intelligences. The data also demonstrate variable participation and participatory experiences in online and offline environments, and academic goals e.g., targeting different levels –which adds validity and reliability to this study by allowing comparison across cases (see also Duff, 2006). In this sense, this data corpus represents a diverse range of student abilities, interests, and attitudes, which allows refuting or supporting emerging conclusions about teacher training through classroom tutorials and online small group work and thus providing substantial data to serve the research objectives.

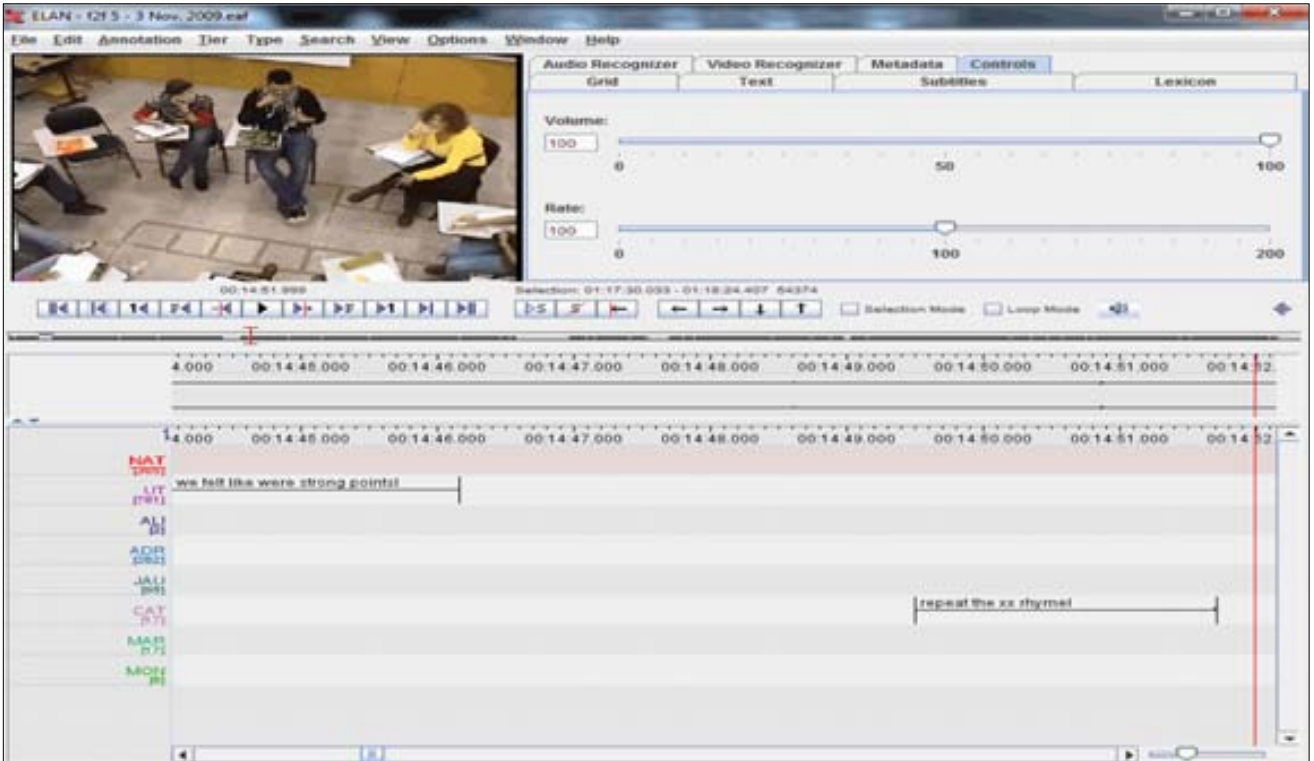
Throughout this sampling, the research remained longitudinal and holistic in its scope in the sense that the data analyzed depict the interactional activities, focusing specifically on activities which have been identified in the literature as common and important in teacher education. These results can bear invaluable insights about the phenomenon of blended learning for teacher education which could form a hypothesis to be quantitatively tested using a larger population sample in the future.

7. Reconstructing the process of analysis: Techniques and strategies in action

7.1. Transcription (ELAN)

For the analysis phase, I fully transcribed the video and audio recordings of Practicum III and IV using the ELAN software (transcription key in Appendix 2) as basis for subsequent holistic codification, interpretation and theory-development.

ELAN allowed the incorporation of both video and audio data and thus facilitated meticulous analysis of words in relation to visual content. Picture 1 shows a snapshot taken during the transcribing process.



Picture 1: The transcription process in ELAN

7.2. Storage and codification process (NVIVO8)

Focal (now in transcript form) and triangulation data were stored, coded and analyzed using a particular type of CAQDAS, under the trademark NVIVO8 (henceforth NVIVO8 QSR), following Grounded Theory (GT) procedures. This software became a multi-purpose and multifunctional tool in this investigation; it served as an easily-deployable database for storing, organizing, accessing and exploring the research material and provided a practical tool for codification and analysis procedures of the large data corpus.

Following Dörnyei's (2007: 62) recommendation to have an "audit trail" of the analytical and interpretive process, the remainder of this section delineates the analytical steps taken to reach the findings.

In this type of qualitative process the researcher becomes the instrument, or borrowing Denzin and Lincoln's, (2000: 4) metaphor the "bricoleur and quilt-maker" of experience, who helps disclose new "ways of seeing things and reveals hidden assumptions", while always remaining as close as possible to the participants' interpretation.

7.3. A guide through the coding procedures

In line with the premises of the GT methodology, I implemented a 3-cycle coding process on the focal data (interactions and wiki final reports; focal data was both oral and written). In qualitative research, codes are used as a heuristic technique (Greek for "to discover") for exploratory problem-solving. Coding can provide rigorous and evocative analysis and interpretation for a report" (Saldaña, 2009: 8). Overall, the codification process illustrates a gradual development from general mapping into a lucid and theoretically substantiated account of the workings and dynamics of the teacher professionalization process that were reported by the participants as beneficial and conducive to learning (see Figure 2).

The implementation of the mixed-method component of this research helped to tackle the challenges in doing qualitative scientific research (see Chapter 5 above) by determining the salience of the outcomes delivered in the analysis.

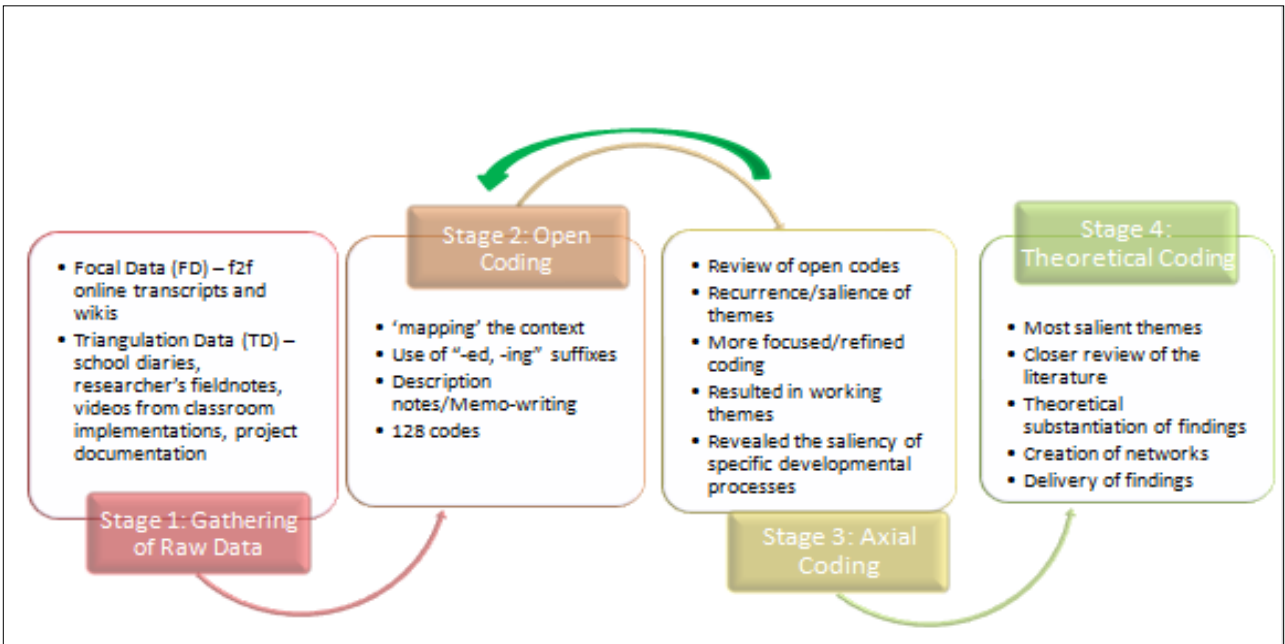


Figure 2: Representation of the analytical process

In the remainder of this section, I provide a guide into the codification process, elaborating on the specific strategies used at each stage.

7.3.1. Cycle 1: Open coding

At this stage, I was “generat[ing] the bones of the analysis” which I would then integrate to “assemble those bones into a working skeleton” (Charmaz, 2006: 45). Accordingly, I sought to keep the codes as open and flexible as possible in order to first make sense of the processes underlying teacher learning in this setting; and second to make connections between distinct events of cognition initially dispersed in time and space, thus creating an integrated storyline of the experience (Lincoln & Guba, 1985; Charmaz, 2006; Strauss & Glaser, 1967).

Guiding questions for this initial phase of coding were:

1. What have these student-teachers identified as their learning outcomes at the end of the year?

2. Can these outcomes be related to the online dialogic interaction? In what ways?
3. How does the learning process develop in relation to the overall social network of university tutorials and school?

Specifically, I coded text-based data from the end of the year and the respective oral-presentations (product-oriented data). In this set of data the student-teachers talked about their development, as they perceived it. Then, I went back to the interactional transcripts and my notes from the field (process-oriented data) and engaged in an extensive codification process. For example, I coded thematic content such as fears, anxieties, opinions, old and new attitudes to learning and learning through technology, identified cognitive outcomes and so forth. Then I coded repetitive ideas from incidents of classroom tutorials and chat interactions, in vivo coding of participants' words that indicated a significant learning moment and pointed at an educational or learning outcome (Charmaz, 2006). The form of the codes included topic coding, in vivo-coding i.e., verbatim coding of the participants words and process coding.

As mentioned above, the analytical objective intended to facilitate a storytelling of the learning experience of the participants which takes into account the temporal dimension of the events. To this end, a tailor-made heuristic for the purposes of the codification was invented and consisted in the use of gerunds i.e., the -ing suffix to denote process (and therefore reflected the local timescale of events) and the -ed suffix for outcomes (in the final reflections of participants to signify outcome) in order to emphasize the temporal relationships.

The first-cycle coding generated 128 codes in total (see Appendix 4). During the coding, I had also accompanied each node with a short note/summary/description as Free Node properties and memo-writing (again facilitated by the software) as (1) documentation of my thinking and ideas

when devising the specific code; and (2) an attempt to unpack the complexity of the interactions i.e., explicit, implicit and interactional content of the interaction.

7.3.2. Note-taking and memo-keeping while coding

For the sake of transparency and credibility, I give the following example of codification, note-taking and memo-keeping.

1 UT narrow it down. i think you're also struggling a little bit I want them... they've
2 got to see this grammar. they've got to see it but I want them to use them... to learn
3 english. I want them to write their own stories but they have to use these
4 structures. so you're kind of struggling between letting them go and doing their own
5 thing and controlling it and that's gonna drive you crazy too. so you're gonna have
6 to decide as a teacher which is it? i introduce here are some things that you can
7 use here are some tools they use them or they don't or you say you have to have
8 this in your story.
9 ADR no the idea was to leave them free...
10 UT so then
11 ADR just to give them prepare everything they might need but if they don't use it
12 UT but you're struggling there because you're saying well they have to see this
13 vocabulary they have to know this vocabulary they have to use this
14 ADR no they ha-
15 UT but they can write their own story and that seems to be creating conflict for you
16 ADR i mean they don't need to know it but I would have to... at least show them
17 that they have the possibility of using it
18 UT okay that's different
19 NAT well I would also focus on one... one... product/ final product/ and... well i
20 like the way he introduces the...
21 JAU the castles
22 NAT the castles and the... to give them some sources as vocabulary... but not
23 just use them but just as a help for them. I like that. °I don't know°. °I don't know°
24 UT and you're absolutely right when... if they don't know it you say okay you
25 know you're brainstorming and make them understand you're brainstorming
26 [demonstrates with hands] so as you're writing if you don't know a word put it in
27 catalan or spanish then we'll figure it out and you work together as a group to
28 figure out the doubts and that's a great way to learn about a language as well
29 because it's words it's structures and words that they want to know and that will
30 work yeah? as you work it out together you say okay as groups you could help
31 each other figure this out and if you can't then we'll you could even spend a
32 session working on doubts they do their brainstorming and their writing and
33 then you come together and say okay what things do you not know and you
34 make a list and you work it out together on the whiteboard or whatever the
35 questions you have yeah?

This extract was coded under the following codes: (1) Teacher control vs. teacher guidance; (2) emerging or explicit grammar instruction; and (3) group work/dialogic teaching and learning. This overlap is indicative of the complexity involved in isolating single concepts in an interaction. In face of this challenge, I took the following notes.

In this same interaction we can discern/distinguish multiple levels of learning i.e., conceptual, practical and interactional. Thematically this interaction echoes classroom group work- peer assessment. This interaction took place at the beginning stages of the practicum (3 November 2009) so it is considered as the initial stages of developing this skill. In its relational context (to other events), and perhaps more implicitly, this extract indexes innovatory teaching the concepts of the delivery of teaching i.e., competence-based and autonomy-oriented; and role of the teacher as a guide and not as transmitter of knowledge. Interactionally, a very relevant feature is the modelling of teacher discourse in conveying evaluations about appropriate tasks for the classroom in relation to the overall curriculum objectives, which was later on the online setting to contribute to others' knowledge. Also in its relational context, this extract documents a resemblance between the tutor's evaluative discourse ("it's a great way to learn") and Caterina's virtual talk. In turn, this finding redirected me to the literature and learning theories to understand the processes of imitation in relation to learning.

This note-taking was an attempt to tackle the challenges involved in unpacking such a complex construct as learning-in-interaction in single features i.e., concepts/ideas responding to a what question- what, skill- how to, interactional- how to with words/delivery multi-functional character of language. These levels and observations were documented in the descriptions and memos. In turn, this documentation ensured the reliability of codifications and facilitated the second coding

cycle i.e., axial coding (described below), during which I sought to make connections between the codes (events) in order to construct episodes (sequences of events, see Analysis part).

7.3.3. Cycle 2: Axial coding

Axial coding consists in constant comparison between codes to obtain an increasingly focused coding into main themes. According to Auerbach and Silverstein (2003) a theme is an “implicit topic that organizes a group of repeating ideas”. At this stage, I engaged in a constant review and comparison of codes, and made use of the descriptions and memos, to discover links between concepts, incidences, and practices. Their properties hold significant aspects of the emerging categories and help reduce the initial list of open codes into more manageable ones. Reviewing the resulting codes, I grouped together the ones that looked and read convincingly similar at first sight. The notion of "tracers" (Roth, 1996; Barab, Hay & Yagamata-Lynch, 2001) were a very useful heuristic in this process, complemented and substantiated by the nodes' descriptions and memos. Roth (1996: 193) explains that tracers are "artifacts, procedures, actions, talk, or written symbols that allow researcher s to identify and trace students' understanding in different contexts or settings" through talk.

For practicality's sake and given the daunting number of open codes, I first selected the most recurrent codes (those with at least seven references⁹ or more as temporary organizing themes in order to facilitate the process of finding patterns between initial codes, identify themes and to make the grouping process more manageable and straightforward. This selection made up a total of 36 codes and corresponded to 28.1% of the overall open codes (128). The references to these

⁹ The total of times that a specific theme appeared in the data

codes added up to 396, thus making up 61% of the total number of references (649) (see Table 1 below).

	Name	Sources¹⁰	Refs (total 649)	% of total
1	Abolishing power relations	7	22	3.4
2	Modelling appropriate pedagogical communicative assessment and reflective practices for FL learning	6	22	3.4
3	At the top of the hill	6	19	2.9
4	What do I do about assessment	12	18	2.8
5	Internalized concept - Communicative language teaching	10	17	2.6
6	Re-operationalizing conceptual knowledge and skills to formulate new teaching practices	4	17	2.6
7	UIUC positive reinforcement	5	15	2.3
8	Using learned strategies to formulate objectives	6	15	2.3
9	Opening up to dialogic learning	11	13	2.0
10	Recognize and appreciate other's contributions to individual learning	10	13	2.0
11	Teacher control or teacher guidance - Passing the lead to the students	6	13	2.0
12	Experience of culture and language-related events in authentic context	5	11	1.7
13	Teacher actions - Providing for and supporting students in learning process	3	11	1.7
14	Developed reflection and critical thinking through diversity	9	10	1.5

¹⁰ The number of places i.e., different types of data in which a specific theme appeared

	of opinions			
15	Teacher as creator of opportunities for interaction and guide	7	10	1.5
16	Deployment of technology for professional and educational ends	2	9	1.4
17	Encouragement of communicative language events in the classroom	4	9	1.4
18	Giving constructive feedback	3	9	1.4
19	Learned to see mistakes as an opportunity for reflection and improvement	6	9	1.4
20	Supporting students in their learning - providing resources to support learning activity	5	9	1.4
21	Using conceptual knowledge to detect weaknesses or strengths and construct feedback	3	9	1.4
22	What's the purpose of your practices - Does that make real sense to students' learning	4	9	1.4
23	Coming across new methodologies, resources, methods of classroom practice beyond Catalan sociocultural context of teaching and learning	4	8	1.2
24	Flexibility - Adaptability to the students' needs	5	8	1.2
25	Integrating technology in communicative pedagogical thinking	4	8	1.2
26	Orientation to lifelong learning	6	8	1.2
27	Peer assessment	4	8	1.2
28	Questioning evaluating and modelling adequacy of assessment student-centeredness realistic objectives in others' designs	4	8	1.2
29	Relating others' design with concepts- own practices to propose solutions	2	8	1.2

30	Socializing with transatlantic partners	2	8	1.2
30	Teacher as a model of language	6	8	1.2
32	How do you group and how do you assess	4	7	1.1
33	Initial insecurities with technology proposed	5	7	1.1
34	Learned to integrate real communication in the classroom - podcast example	5	7	1.1
35	Stressing the interdisciplinarity and integration of multiple approaches to teaching FL	5	7	1.1
36	Suggesting methods of classroom practice in line with CLT	3	7	1.1
			396	61%

Table 1: Selection of open codes

That said, I moved back and forth between the selected tracer codes and their descriptions and patterns began to emerge. I noticed that some codes and coded extracts evolved around a similar idea, practice or skill or action carried out. This allowed me to create relationships between these codes, which led to the development of 8 organizing entities for the remaining codes. As explained above, the interactions were described on multiple levels related to learning, which accounts for the fact that the same code may appear under two different themes/categories (see table 2 below).

Organizing idea	Codes	Description
Community and learning	9, 14, 19, 23, 31.35	Confidence in the presence of others Continuous social and psychological support

Formative teaching practice	6, 11, 14, 18, 19, 23, 26, 27, 34, 35	Enhanced opportunities for inquiry, giving constructive feedback to others receiving suggestions, Devising resource kit for CLT
Learning to set objectives	6, 8, 22	Discussion around initial stage of defining realistic objectives for the classroom, receiving orienting feedback from tutor and peers underlying development of cognitive tools for thinking and reasoning skills
Technology and language learning and teaching	12, 25, 29, 32, 33	Changing attitudes
Orientation to lifelong learning	26	The student-teachers' evaluation of own skills at the end of the practicum as grounds for lifelong learning based on their learning to learn in community
Confidence in ability to teach	3	The student-teachers' reports of increasing confidence based on knowledge development and feeling part of community
The communicative language teacher	11, 13, 15, 20	Explicit reference to the role and responsibilities of the teacher in the classroom

Table 2: Temporary organizing themes

7.3.4. Tracing salience

The salience of codes emerged with the introduction of the remaining 90 codes (see Appendix 5). At this stage, these codes were grouped based on their properties (through the annotated descriptions) and relationship to the research objectives. This categorization (Appendix 4) illustrates the overall storyline of components of this teacher professionalization process and product in this setting.

The final merging of the codes continued until the codes convincingly looked alike (Lincoln & Guba, 1985). Concretely, this process involved the reformulation or elimination of old and creation of new more representative codes based on similar properties and according to the research objectives and requirements (Strauss & Glaser, 1967). Initial themes were refined through reformulation and creation of other codes that were more representative of the content of the interactions, and elimination of old codes that were no longer viable.

In order to ensure that there was no double-coding of the same extract under each category, all the codes were then added to the categorizing theme in NVIVO8. For example, all the extracts in the codes listed under the theme of formative teaching practice, community and learning and so forth were transferred to this category. In doing so, duplicates were removed (NVIVO automatically replaces duplicate extracts), and the salience of categories was clearly established.

Table 3 indicates how the constant refinement of codes revealed the salience of categories over others.

Tree Nodes			
	Name	Sources	Referen ▾
+	Formative teaching and learning practice - Reflective skill	38	107
+	Technology and learning	34	101
+	Learning to set objectives	23	64
+	Community and learning	29	62
+	Teacher role and responsibilities in the classroom	21	58
+	Developed confidence	15	44
+	Materializing CLT through concrete examples of classroom practice	20	40
+	Lifelong learning	7	9

Table 3: Emerging categories

These categories were the most frequently mentioned in the multimodal interaction and final reflections. The analysis and interpretative process of this study is grounded and organized on the 3 most salient relevant categories. Less salient categories were useful ethnographic contributions to the development of the story.

7.3.5. Cycle 3: Theoretical coding

At this point, I revisited the literature to construe and interpret the relationships between the findings and the objectives of current teacher education, as they are identified in (inter)national curriculums of educational pedagogy. In turn, the construction process was in turn substantiated by learning theories and understandings of learning and developmental processes. In GT terms, at this stage, theory began to emerge from the data and was used to construct the theoretical framework of this research in a cyclical, iterative process (see Chapter 4, Theoretical underpinnings of research).

The 3 categories were then reformulated as follows: (1) Strategic planning skills (previously learning to set objectives); (2) dialogic turn to teaching and learning (previously formative teaching and learning practice – Reflective skill); and (3) Digital and integrated skills (previously Technology and learning).

Selected category	Description	Recurrence
Strategic planning skills	This category relates the gradual development of know-how to strategically plan instruction, within the objectives and goals set by the curriculum emerging through guided participation in multimodal interactions. Specifically, it examines the guided processes underlying the mastery of cognitive tools for thinking and technical language for synthesizing, visualizing and sequencing communicative-based and competence-oriented instruction.	64
Dialogic turn to learning and teaching	This category relates relevant multimodal episodes of interaction which document gradual socialization into the community of teachers enacted through efficient collaboration with other professionals. This process develops through the ability to inquire information from others, evaluate and appropriate the information received ability and contributing to others' knowledge.	107
Digital and integrated skills	This category relates digital, conceptual and integrated skills and demonstrates openness to future technology-integrated pedagogy. All three student-teachers developed varying degrees of motivation for implementing technology through participation..Their initial concerns were transformed into enthusiasm with tools, authored technology implementations in classroom pedagogy and motivation for the future based on a conceptual understanding of pedagogical implementation of technology.	101

Table 4: Salient categories

7.4. Quality criteria in this research

Theoretical validity: This research aligns with current conceptualizations of learning as a situated and distributed process not only across social agents and tools but also across time (Wortham, 2001; Mercer, 2010). These authors argue that education requires an empirical investigation that takes into account the temporal dimension of how tasks were enacted through talk in order to argue whether it succeeds or fails. This research substantiates this process through analysis of “intertextual referencing” (Agha & Wortham, 2005), “intertextual ties” (Mercer, 2010) or “tracers” (Roth, 1996; Barab, Hay & Yagamata-Lynch, 2001) of interactions that took place at different moments and/or physical surroundings. Using codes established through GT methodology as tracers of the learning process, this research provides evidence about learning not as a quality that is acquired suddenly through a direct transmission or an accumulation of information but as the “gradual induction of students (in this case student-teachers) into new perspectives and the development of new problem-solving skills and new ways of using language to representing knowledge and making sense of experience” (Mercer, 2010: 34).

At the same time, this research acknowledges theoretical propositions that identify learning as incidental or informal and which may also occur accidentally in association with certain occasions e.g., last-minute changes to teaching plans at the internship school. This said, it is not the aim of this research to offer an exhaustive account of the incidences that were conducive to learning. Rather, the intention is to draw correlations between a sequence of interactional episodes with recognizable learning impact, which could be observed and empirically documented and which the student-teachers’ themselves reported as conducive to learning in their final self-evaluations.

Trustworthiness: As mentioned above, this research counts largely on qualitative data, collected in line with the premises of the naturalistic inquiry epistemology, as put forward by Lincoln and Guba (1985). Nonetheless, and without any *a priori* commitment, the need to integrate aspects of quantitative methods emerged as a ‘best-use’ technique in line with the pragmatist position on doing research (Dörnyei, 2007; Rocco et al., 2003 for a description of the different ways of method-mixing in research).

Quality safeguards are implemented to resolve “nuances of particular empirical questions, ensure that data are not insipid” (ibid.: 55-57) and that the particular meaning that they convey is salient and interesting enough in relation to other meanings. To these ends, I use quantitative information facilitated by computer-aided data analysis to demonstrate the salience of the specific categories analyzed and displayed. Largely aligned with the discussions in Chapter 5, the trustworthiness i.e., validity and reliability of this research lies in the interpretation of tangible events, behaviours or objects and what they mean to the participants (Maxwell, 1992). Accordingly, the research provides exemplary instances of phenomenon/categories (ibid: 56) in context. This context is presented in the form of a storyline through which the reader can make out the interrelationships between time-specific instances or events of cognition. In other words, the analysis demonstrates the continuity of the learning process through the display of multiple extracts of interactions while at the same time highlighting, as much as possible the rationale that led to the specific interpretations and conclusions (Silverman, 2005; Miles & Huberman, 1994). At the same time, the validity of this research lies in the account of the learning process through specific examples that demonstrate continuity and logical correlation between

research questions, methods and outcomes, which readers can confirm by reading the examples displayed and drawing their own interpretations.

Confirmability of interpretation (Lincoln & Guba, 1985): The “interpretive validity” (Maxwell, 1992) is measured by the extent to which the interpretation provided is confirmed by the extracts and the factual accounts of the context (see Lincoln & Guba, 1985).

The analysis tries to remain as close as possible to the perspective of the participants and relate their own point of view in regards to the happenings. Validity and reliability checks were constantly performed through data triangulation, using different sources of data, obtained at different phases of the course. In addition, respondents’ feedback was obtained, not through post-interviews - commonplace in qualitative research - but through final year reflections, and interactions between myself and the participants in school and naturalistic settings outside the classroom. In these checks, it is possible to extract what the events, behaviours and objects of the context meant to the participants and in this way verify and confirm the interpretations of the interactions through the participants’ perspective.

Triangulation of findings: The research methodology and advances (for instance, preliminary and more focused results) were presented on several occasions throughout these five years. Namely, summer universities ¹¹, workshops ¹², conferences and

¹¹ Antoniadou, V. (2011). A multivoiced blended-learning environment for teacher learning: A cultural-historical perspective to investigate the complexity of the developmental process. Second International ISCAR Summer University, Theoretical problems with Cultural-historical Psychology in the context of emerging social practices. Moscow, 26 August – 2 September, 2011.

¹² Antoniadou, V. (2011). Constructing teacher knowledge and awareness of required skills in a multivoiced setting: A CHAT perspective. EUROCALL CMC & Teacher Education SIGs Annual

congresses¹³, as well as seminars¹⁴ and small-group data sessions¹⁵ with other PhD students, including members of the GREIP research team and experienced teachers and researchers in language teaching and teacher education from Catalunya and abroad. This engagement facilitated ‘collective judgment’ and enriched reflection on the research itself, the methods used, and the findings from diverse perspectives.

Generalizability: As mentioned in Chapter 5, generalizability of findings is a major determinant of quality in scientific research and a central source of disagreement between quantitative and qualitative researchers. As also previously explained, qualitative researchers make different sense of generalizability, which alludes to the idea of transferability and/or analytic generalizability. These premises redirect the discussion to the essence of ethnographic case-studies; that is to contribute to the generalization of

Workshop: Getting the Bigger Picture: Language Teacher Competences in CMC Settings, Barcelona, Spain, 14-15 April 2011.

Antoniadou, V. (2010). Researching teacher training: An in situ approach. EUROCALL SIG: European workshop on teacher education in CMC and CALL, Institut National du Recherche Pédagogique, Lyon, 26-28 May, 2010.

¹³ Antoniadou, V. (2012). Becoming ‘Languaging’ Teachers: Embodied Social Actions of Learning and Teaching. Insights into applied linguistics: languaging, agency and ecologies. Jyväskylä, Finland, June 2012 [co-presenting with Melinda Dooly].

Antoniadou, V. (2011). Developing teacher knowledge through (tele)collaboration: A methodological bricolage to investigate the complexity of the socially-constructed environment. Paper presented at ISCAR 2011 Congress, Rome, Italy, 9 September 2011.

Antoniadou, V. (2011). Constructing teacher knowledge in a multivoiced blended-learning environment: A cultural-historical perspective to investigate the complexity of the developmental process. Research outline and preliminary results presented at ISCAR 2011 Congress, PhD students’ day 2011, Rome, Italy, 5 September 2011.

¹⁴ Wortham, S., (2012) Seminars on Methods of Discourse Analysis. Universitat de Barcelona.

¹⁵ Antoniadou, V. (2011). Avέλιξη: Investigando la formación del profesorado vía telecollaboración en un escenario multivoz. Paper presented at Jornades interuniversitaries. Universitat de Barcelona, Spain, April 2011.

phenomena that re-appear across contexts, add to the existing funds of knowledge or create new ones (Yin, 2003).

This study details existing research on the field of blended learning in different sociocultural contexts and draws connections with the findings of this research (see literature review in Chapter 3 and Chapter 12). In doing so, this research provides further substantiation to the previously reported affordances of blended learning instruction and the validity of theoretical foundations underlying the socioconstructivist and dialogic approach to learning and development. Through a hopefully clear account of the procedures underlying the data collection and analysis, this research offers conclusions and suggestions for empirical testing in other contexts in order to account for generalizability (Lincoln & Guba, 1985; see also Yin, 2003; Eisenhardt, 1989). On the same vein, this study provides a detailed delineation of methodological and analytical processes, through which the reader is encouraged to establish the degree of similarity between this and other contexts in order to transfer particular aspects that they may find appropriate for their own pedagogical or research purposes (Lincoln & Guba, 1985).

Part IV

Analysis

Overview

As announced in the introduction of this study, the focal objective of the analysis is to illustrate the process-product relationship in teacher professionalization across university and virtual interactions. Following the description of the research context in Chapter 8, Chapters 9-11 trace the learning process through interconnected events, as they occurred in this blended learning environment and their impact on student-teaching development. To this end, these chapters follow the three focal student-teachers through multimodal intra and inter-class interactions i.e., university and virtual settings with their teacher educator, classmates and virtual partners respectively in the process of designing didactic material. Particularly, the chapters illustrate, through discourse and interaction analysis, how each one navigates these multimodal interaction settings, develops and applies fundamental knowledge about teaching.

An introduction to the ‘episodes of cognition’

Each of the following chapters is organized across the three categories of development, discovered in the data. Each category presented is divided in two sections. The first section looks at final outcomes - thus instrumentalizes the product-orientation of this research. It presents products (final reflections in wiki report format and final year oral presentations) in order to provide an opening to then explore in more depth how these outcomes (identified professional teacher competences) were developed during the year-long process. These first sections are necessarily briefer than the process-oriented sections and as far as temporal sequence goes, the section presents final events first. However, this helps provide

a framework for analysis and discussion of the processes whereby those competences (as recognized and highlighted by the participants themselves) were gained.

The analysis then covers the process-orientation objective. To this end, the analysis of the process is delivered in clusters of interactions dispersed across time and space, which are referred to as ‘episodes of cognition’ (Barab, Hay, & Yagamata-Lynch, 2001; Wortham, 2006). Concretely, these episodes are defined as sequential multimodal developmental processes, indicating changing levels of mastery of specific concepts or skills e.g., developing the skill of strategic planning. Each episode consists of events that serve to pinpoint the specific moments of the developmental process which in turn make up the wider episode. Events from school implementations are also included in the analysis in order to show the output following those interactions. The data for these events mainly draw from student-teachers’ designs for implementation and post-reflections, denoting a higher stage of conceptual formation imbued by concrete action (school practice).

Figure 3 below depicts how an ‘episode of cognition’ might be visualized as being made up of different clusters of interaction, or events, which lead towards the mastery of specific competences.



Figure 3: Visualization of how an episode of cognition is made up of interconnected events

The episodes emphasize continuity, interconnectivity and interdependence between the events; this was reported by the participants as central in their overall development. Research-wise, without this coalescence, the interpretation and the appreciation of learning-value would have been different.

Figure 4 provides a visual orientation of how the sequential development of language teaching competences (mastery) are sustained through different episodes of cognition teachers' designs for implementation and post-reflections, denoting a higher stage of conceptual development.



Figure 4: Visualization of the sequential progress of teacher development across (multimodal) events

The specific events (extracts) analyzed were selected over others of the same category because they were deemed fitting for showcasing - in a comparatively more straightforward manner - the interrelationships that were formed between classroom and virtual activity (research objective) and the ways in which these interrelationships became affording to the learning outcomes (most salient ones).

Through this selection, the analysis examines face to face interactions sequentially (taking a temporal approach) for the particularly salient concerns or foci of the student-teachers that emerged in the analysis (see methodology part). Then it considers when and if the same foci occurred in online interaction. Then, the interaction is analyzed more in-depth to pinpoint and discuss the episodes of cognition as part of the wider network of learning. Relevant ethnographic data and signposting across episodes, people and events are provided throughout the analysis in order to further substantiate the interpretation of the learning process and account for shared experiences of the participants e.g., face to face tutorials in which they were all present.

It must also be acknowledged that the linearity displayed in the analysis is and should be understood as artificial, created for the specific purposes of this research. That is to say, particular competences are discussed separately for practical reasons in an attempt to unpack the complexity involved in these teaching skills. They are discussed separately in order to facilitate the reading of this complex practice into a coherent text, not because they are considered to be stand-alone teaching competences. Nonetheless, this sequentiality and artificial linearity displayed are heuristically useful to frame developmental processes underlying teacher learning and demonstrate how the blended environments in which the student-teachers were engaged worked synergistically to increase teacher competence on multiple levels i.e., pedagogical, technical knowledge and skills of conceptualizing and implementing technology-integrated pedagogy all relevant to modern workplace demands.

Figure 5 schematizes the learning process on a timeline and it is intended to help the reader understand the time and space structure of the events that will be described in the analysis. It specifically depicts the physical environment (face to face or virtual), time (across the academic year), learning activities and practices that emerged as conducive to teacher professionalization

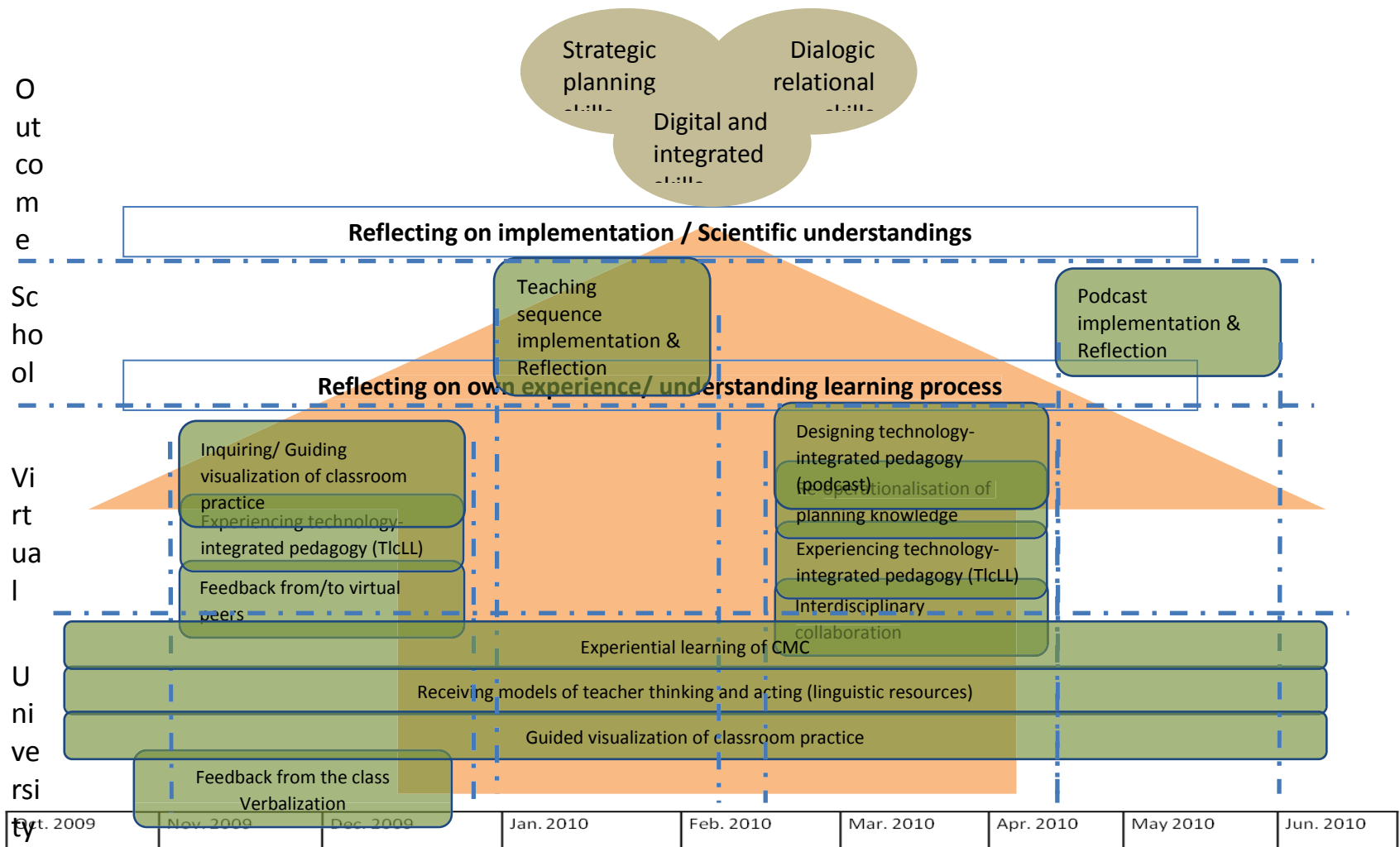


Figure 5: Timeline of the process, activities and practices across multimodal interactions

8. Context of investigation

Overview

This chapter aims at situating the reader in the specific socio-political, institutional and classroom context in which the study was carried out. In this chapter, we first describe the overall sociolinguistic and political context of Catalunya regarding FLE and move on to illustrate the pedagogical design underlying this research project. We provide a detailed description of the participants, the tasks and the participatory framework underlying the implementation of the design and the process of teacher education in this specific context.

8.1. Briefing on the socio-political milieu of Foreign Language Education in Catalunya

Linguistic plurality and cultural diversity and an increasingly strong concern for foreign language education are some of the core identifiers of living and studying in Catalunya (Moore, 2011). English is the first foreign language in the Catalanian curriculum, taught along with Catalan and Spanish as the co-official languages of the autonomous region. The aim is to contribute to bringing up trilingual citizens competent and efficient speakers of all three languages, starting as early as primary education.

In recent years, the Catalan curriculum was adapted to the European standards of education, putting forward an explicit orientation towards competence-based FL instruction. Innovative methodologies such as Content and Language Integrated Learning (CLIL), which place the emphasis on functional, contextually-bound and genre-based language learning, are representative of this aim (Generalitat de Catalunya: Departament D'Educació, 2009)

8.1.1. The Initial FL Teacher Education (IFLTE) programme at the Universitat Autònoma de Barcelona

In this context, the degree “Mestre de Llengua Estrangera en Educació Primària” offered by the Universitat Autònoma de Barcelona (henceforth UAB) is designed to support and train future teachers to develop the necessary competences in order to effectively teach language to young and very young learners from 6 to 12 years old and 3-5 years old respectively¹⁶.

The objectives of the 3-year programme are manifold: on the one hand, it aims at supporting future teachers to develop an epistemological understanding of teaching as situated practice in local political and social contexts through real classroom experiences, using guided-reflection based on these classroom experiences. On the other hand, the programme aims at supporting the trainees to develop, analyze and evaluate their own teaching practices.

¹⁶ It should be noted that the programme that guided the course under study is no longer offered. In 2010-2011, the 3-year specialist degree was replaced by a 4-year general education degree, with a 1-year minor in foreign language teaching.

In view of these objectives, the 3-year degree is distributed across analogy continuum of university instruction and school placement. The first two years of the degree bear a strong focus on the theoretical and psychological aspects of teaching and learning. Observation periods in real classrooms provide familiarization with the school context but at this point the involvement of the student-teachers in the school affairs is relatively short and does not involve active teaching practice. In the third and final year of the degree, the student-teachers are required to undergo two stages of school placement, which are referred to as Practicum III and IV, wherein they closely observe experienced school teachers' teach and also implement their own teaching plans. In parallel to their school practicum experience, the student-teachers are required to attend university tutorials (practicum sessions) and a Teaching Methods course (TEFL) on a weekly basis aiming at guided reflection on their school experiences.

8.1.2. The Catalan curriculum requirements

The Catalan curriculum, and accordingly the UAB curriculum for primary education require graduate teachers to demonstrate competence in a series of transferrable, specific and general fields of knowledge. Apart from a general knowledge of the curriculum's contents and objectives, graduate teachers should be able to design learning contexts within a framework of diversity and therefore teach within multicultural and multilingual contexts and generally be conceptually equipped to organize, improve and innovatively develop teaching practice.

The UAB curriculum for FL teachers puts forth relational competences and skills as required transferrable objectives. Specifically, it states that upon graduation, teachers should be able to effectively and assertively convey information, ideas and problems to other professionals aiming at improving educational practices and the life quality of students. Teachers should seek collaboration and be able to work with the enhanced community including parents, families. Similarly, it stresses the ability to work in teams of the same or different disciplines. At the same time, it emphasizes critical ability in “manag[ing] information relevant to the professional sphere, making decisions, drawing up reports and critically analyzing and evaluating work done. Furthermore, the curriculum emphasizes the importance of acquiring the skills and competences to encourage and support lifelong learning. Specifically, it requires student-teachers to develop learning abilities and strategies to allow learning autonomy and understand the importance of lifelong learning. In terms of general competences, student-teachers should be able to design, plan and evaluate learning and teaching processes, both individually and in collaboration with other teachers and professionals of the centre in which they teach. In this planning, they should be able to incorporate Information and Communication Technologies as mediums for learning, communicating and sharing in educational contexts” (see Appendix 1 for a list of the competences as defined in the official UAB curriculum).

8.1.3. The practicum course

Chop your own wood, and it will warm you twice - Henry Ford

The practicum is a year-long competence-oriented course designed to prepare students for full-time teaching. The practicum class paralleled the Teaching Methods class, in which more time was dedicated to introducing and discussing the concepts and principles and CB/CLT methodology. In the practicum class, students continued working on these concepts and principles in context, using their teaching plans as specific points of reference. During practicum, trainees were required and encouraged to go beyond the role of students and assume the role of practitioners by attending weekly school classes.

The overall university curriculum ensures a common set of requirements to be met at graduation in terms of skills, competences and final products for assessment; however each instructor has the liberty to suggest the tasks, techniques, tools and timeframes they consider appropriate for their classes and teaching style. In this light, the instructor of practicum class in this study integrated virtual collaboration to the standard curriculum; this virtual component was conceptualized as an additional integrated phase responding to international teacher education literature and previously identified teacher education needs.

8.2. The design of the blended learning environment

As part of the workplan, the design of the practicum proposed the integration of a virtual environment into the usual practicum configuration as an innovative approach to Initial Teacher Education. The virtual collaboration component was integrated, by the teacher in the study, into the already established content of the standard curriculum of the practicum

course at the UAB. This additional component of content and activities served to support student-teachers' professional socialization process through extended interaction across geographies, facilitated by the use of Web 2.0 tools freely available on the Internet. This design was consistent with socioconstructivist theories that place social mediation at the very core of every learning event and mind development, by increasing discourse relating to the potential of technology-mediated network-based methodologies for foreign language learning.

In accordance with the European standards for student-teachers of language (2007), the instructional design addressed the need to provide the participants with situated network-based collaborative experiences; not to learn about new ICT tools *ad hoc* but as a way of fostering a conceptual understanding of the pedagogical value of network-based collaborative experiences, and motivate them to transfer this knowledge into the classroom (Dooly, 2009). The two university tutors involved in the collaboration planned this transatlantic exchange to allow student-teachers to experience collaborative learning through a virtual environment towards a task that required both pedagogical and technological knowledge (participant details, including more information about the universities involved, are given in the next section). Concretely, the intention of the design and implementation under investigation was to present telecollaboration as a real-life modelling of network-based situation in which the student-teachers take control over their own learning process and share their own unique perspective and expertise as a model for future practices (see Egbert et al, 2002; Dooly, 2009). In other words, it involved an integrated approach to technology and the introduction to technology-integrated pedagogy and not technology instruction per se.

In the following extract, the UAB teacher educator describes the goals of this exchange:

Three underlying goals of the exchange design were to: (a) foster student-teacher reflection on their own practice and to promote applied critical thinking; (b) reduce the feeling of teacher isolation and provide a means of peer-support and knowledge-sharing, as well as opinions and experiences; (c) create a virtual community of practice that these student-teachers might carry over into their professional lives. A key element to the design was the need for collaboration with virtual partners, that is, group members whom the student-teachers could only communicate through different Internet media (Dooly, personal correspondence).

This design was structured with instructional activities to foster opportunities for student teachers to develop pedagogical, technological and integrated skills; promote critical thinking and reflection through a technologically-integrated pedagogical experience. The instructional activities in the practicum included:

- (a) School internship and recall-and-reflection activities in online journals (not assessed)
- (b) Individual plans of teaching material and engagement in weekly seminars for discussion
- (c) Engagement in online collaboration with transatlantic peers
- (d) Documentation and reflection on overall learning experience in self-created online portfolio

The design of the material that the student-teachers were required to implement during the intensive period thus relied heavily on the contributions of both university (face-to-face) and virtual peers as detailed further in the following sections.

8.2.1. Considerations and guiding principles to the design of the learning environment

In order to ensure that the exchange remained functional given the 7-hour time difference between the two countries, the student-teachers were allowed relative freedom to decide, arrange and organize their time schedule for meetings and collaborative online activities. Specific deadlines were given for the completion of the two final output but the frequency of the meetings and the dates were left to their responsibility.

In regards to the technology to be used, the two tutors suggested the MSN and/or Skype platforms for the first semester meetings and Second Life in the second semester, aiming at giving the opportunity to the groups to learn about educational uses of different Web 2.0 tools for educational purposes in a “learning by doing” arrangement.

8.3. The participants

There were seven UAB student-teachers randomly partnered up with ten and fourteen student-teachers from the University of Illinois at Urbana-Champaign (UIUC) in the first and second semester respectively, all of whom engaged in the production of didactic material (described in section 8.7 below). In this research we only focus on three student-teachers, one specializing in *Educació Infantil* and two specializing in *Educació Primària*; and their respective UIUC partners. The reasons and criteria of this selection will be explained in the methodology.

Both groups were studying didactics of English but there were certain differences in the two partners’ characteristics related to the level and degrees. The UAB partners were all

undergraduate students in their final year of Initial Teacher Education (ITE), with little to no experience as language teachers, enrolled in the teaching degree entitled “Mestre de Llengua Estrangera” and they were specializing in primary English as a Foreign Language (EFL) education. The UIUC partners were studying Teaching English as a Second Language (TESL) at a masters’ level, had varied experience in teaching English as a Second Language, but they were not specializing in teaching any particular age group. Hence, the UIUC partners were teaching various age-groups, including adults. What is more, the UIUC degree had a particular emphasis on technologies and specifically CMC for ESL.

On the other hand, the UAB participants had limited or no experience with teaching and even less with educational uses of technology in teaching; this was mostly due to their background as learners, in which no technology and consequently no network-based instruction were used.

Telecollaboration was novel and therefore “unknown” both as a concept and practice for the participants, which set the student-teachers beyond their ‘comfort zone’ in both terms of local learning and future teaching. This virtual collaboration phase was their first contact with telecollaboration and web-based technologies such as Zoho writer, Dropbox, Voicethread, as well as Web 2.0 tools i.e., Second Life. The UIUC participants were more familiar, and somewhat more experienced with the technology proposed, although their social experience with the proposed tools seemed to significantly outweigh their professional experience of use.

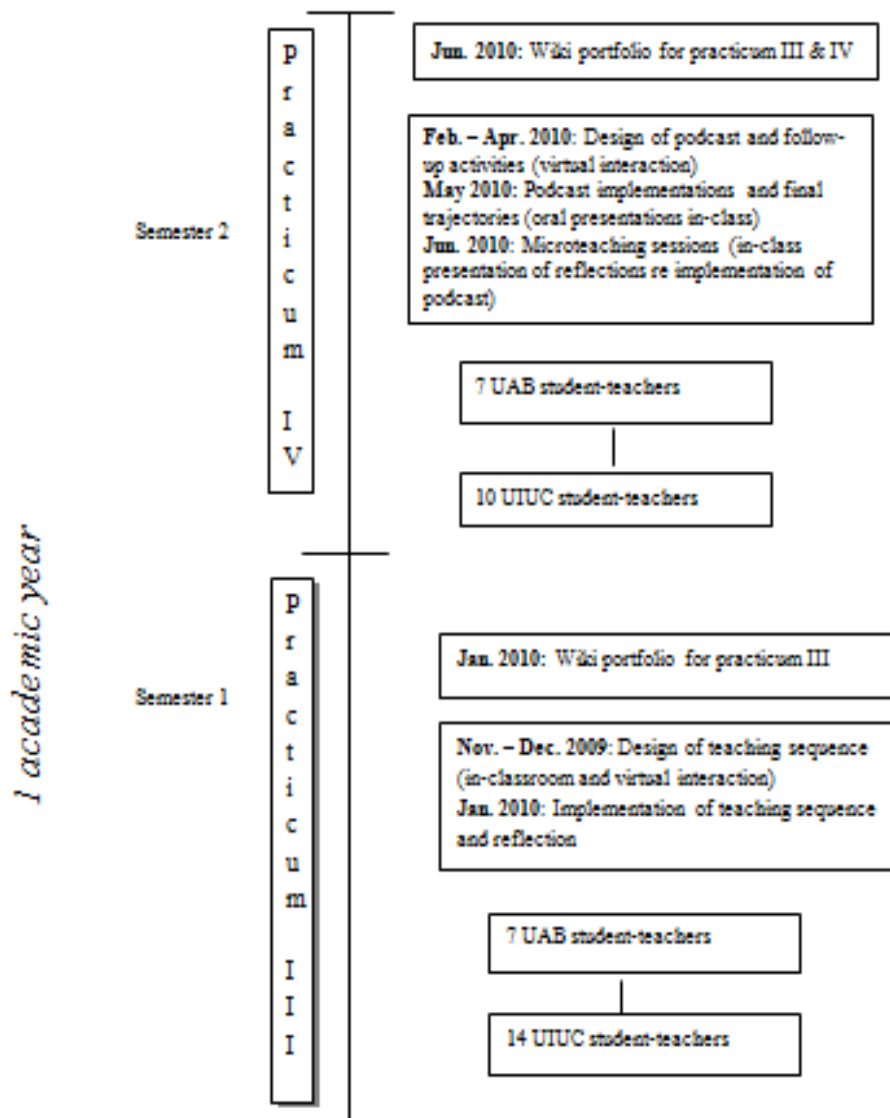


Figure 6: The practicum people, tasks and timeframe

8.4. Sites and participatory framework

In line with existing pedagogical models of effective educational practice, this learning configuration included multiple types of participation. Derived from sociocultural theoretical foundations, the learning process is guided by people of different expertise on the premises of ZPD (Rogoff, 1995).

8.4.1. University tutorials

The tutorial sessions took place on campus and were sequenced as individual presentations and follow-up round-table group discussions and counted on the supervision and guidance of the teacher educator. The teacher educator encouraged and closely guided the processes of reflection and evaluation of teaching practices, and intervened as the “expert other” to problematise and re-frame the discussions according to pedagogic concerns.

First, the student-teachers presented their initial unit plans in a PowerPoint format, displayed on the class projector (picture 1). Picture 1 shows Caterina¹⁷, one of the 3 focal student-teachers in this investigation at the moment of presenting her first draft of unit, as basis for later discussion.

Then, the student-teachers, university educator and researcher moved into a cyclical configuration of desks for group discussion. This configuration formed the physical context of the interaction supporting the construction of a dialogic framework of guided participation as the student-teachers shared their experiences, ideas and advices to their

¹⁷ Names of all participants have been changed to protect their identity. Permission for use of transcripts, student output and images were granted by the students in a written release form.

peers. Specific elements of interaction reflecting this dialogic construction of guided participation will be exemplified in the analysis that follows.



Picture 2: Caterina's unit presentation

In picture 2, Anaïs, a focal student-teacher in this research, shares her plans and thoughts with her peers, during a round-table discussion



8.4.2. Virtual collaboration

The face-to-face tutorials provided a more stable setting for interaction and group work in the sense that the participants met on a weekly basis for one year; the online arrangement involved a more “temporary coming together of activity groups” around particular tasks (Barab & Duffy, 2000). It underlined the reciprocal nature of “learning by doing” i.e., the interrelation of practical technology-mediated activity and the materialization of a conceptual understanding of computer-mediated communication in relation to local conditions and social practices. The UAB were randomly partnered up with student-teachers from the University of Illinois at Urbana- Champaign (UIUC) in the configuration of 1 UAB-2 UIUC students. Virtual collaboration between the two university teachers involved was also a significant element to the planning –weekly online meetings served to revised, adapt and resolve problems as they emerged during the exchange.

The main platforms used were MSN, Skype and Second Life, for synchronous communication and the Moodle, Zoho Writer, Dropbox, email and Google Docs for asynchronous communication.

8.4.3. School

At the Universitat Autònoma de Barcelona (UAB) student-teachers specializing in Foreign Language Teaching to primary education (“Mestre de Llengua Estrangera”) are required to complete 200 hours of school placement, which are distributed across two semesters: practicum III (semester 1) and practicum IV (semester 2). Each practicum stage comprises

an extensive period (emphasis on observation of real classroom practices) and intensive period (emphasis on planning, teaching and evaluating own performance). During the extensive period, student teachers are required to participate one full day each week as interns in a public school setting in the Barcelona district, communicate regularly with the school teachers (general tutor and English tutor), learn about the school and English classroom reality through direct observation, report their observations in individual ‘recall-and-reflection’ journals and share them with the university mentor (teacher educator at the university). UAB student-teachers reported on “hot moments” (as university tutor and student-teachers called them) of their school experiences in Moodle, shared them with the instructor who then commented on them through Moodle posts, which turned this into a reciprocal learning experience. Gradually the student-teachers were allocated full teaching under supervision during the intensive period. Student-teachers were required to coordinate with school teachers – the “main experts” of the classroom reality - at all stages of the planning and school teachers. As such, student-teachers were required to consult with their school tutors at all stages of the design of the materials and needed to obtain their consent before any material could be implemented in the classroom in order to ensure coherence and effective implementation.






8.5. Description and sequence of the collaborative tasks

The blended university activity lasted two semesters and focused on two major final products distributed across each semester: (1) teaching sequence (2) podcast; (3) e-portfolio (although they were other products such as an Action-Research report, which is not analyzed in this research).

8.5.1. Teaching sequence

In the first semester, the UAB student-teachers were required to design a teaching sequence to cover a distributed six-hour period of teaching time, which they would implement in the schools they were assigned during the extensive period of the practicum.

The process involved brainstorming and formulating initial ideas of material and pedagogical practices. According to the instructions, the two partner groups were required to think of adequate material for the primary class to which they were assigned and then do some brainstorming of possible teaching activities and share them with their UIUC and UAB partners in Moodle, who were then required to comment on the brainstorming posts. The UAB and UIUC student-teachers used this initial brainstorming and the comments to devise the first draft of their teaching sequence, which they presented in the class for further face-to-face comments and a more inclusive discussion with their university tutor and classmates.

DISCUSSION	STARTED BY	REPLIES	LAST POST
DANCING ENGLISH 2	 Javier Oliva	5	Andrés García Wed, 18 Nov 2009, 01:57 PM
English and its influence on culture and identity	 Tamara Brayak	5	Tamara Brayak Tue, 27 Oct 2009, 03:50 PM
teaching sequence	 Mirna Solé	20	Mirna Solé Mon, 26 Oct 2009, 07:40 PM
Vocabulary and writing	 Juval Raceles	8	Juval Raceles Fri, 23 Oct 2009, 06:03 AM
Newspaper in reading and writing class	 Sunsook Cho	4	Anna Barberà Cubero Thu, 22 Oct 2009, 12:41 PM
A possible EAP course (architecture)	 Pei-Hsuan Hsieh	2	Pei-Hsuan Hsieh Thu, 22 Oct 2009, 09:36 AM
Lesson Planning Templates	 Melinda Dooly	3	Melinda Dooly Wed, 21 Oct 2009, 10:11 PM
My unit	 Mirna Solé	8	Mirna Solé Wed, 21 Oct 2009, 07:28 PM
To be or not to be, that's the question...!	 Andrés García	0	Andrés García Tue, 20 Oct 2009, 10:30 PM
A creative writing unit	 Eun Chung	6	Núria Botella Mon, 19 Oct 2009, 07:10 PM
What do you think?	 Cristina Mandejar	11	Cristina Mandejar Mon, 19 Oct 2009, 02:45 PM
Very rough ideas for first course!	 Lee Ragsdale	2	Melinda Dooly Mon, 19 Oct 2009, 12:20 PM
General Questions for Everyone	 Randall Sadler	4	Melinda Dooly Mon, 19 Oct 2009, 12:18 PM
making it meaningful for the grad students	 Katherine Wu	6	Melinda Dooly Mon, 19 Oct 2009, 12:04 PM

Picture 4: Moodle forum discussion

At the same time, the student-teachers shared this first draft with their online partners in Zoho Writer and they received comments from them in text-based format both in Zoho and during a synchronous conversation via MSN chat.

Again, the student-teachers were given a choice as to what platform they wanted to use for the synchronous exchange; the tutor suggested that they used platforms that they were familiar with such as MSN and/ or Skype. The majority of them chose to meet on MSN. This first round of feedback formed the basis for the development of a second draft. Incorporating the changes they considered appropriate, based on the feedback they had received, the student-teachers presented their second draft for a second and final round of feedback to their classmates and tutor. The third and final design of teaching unit they implemented at the school and reported their implementation experiences in a wiki.

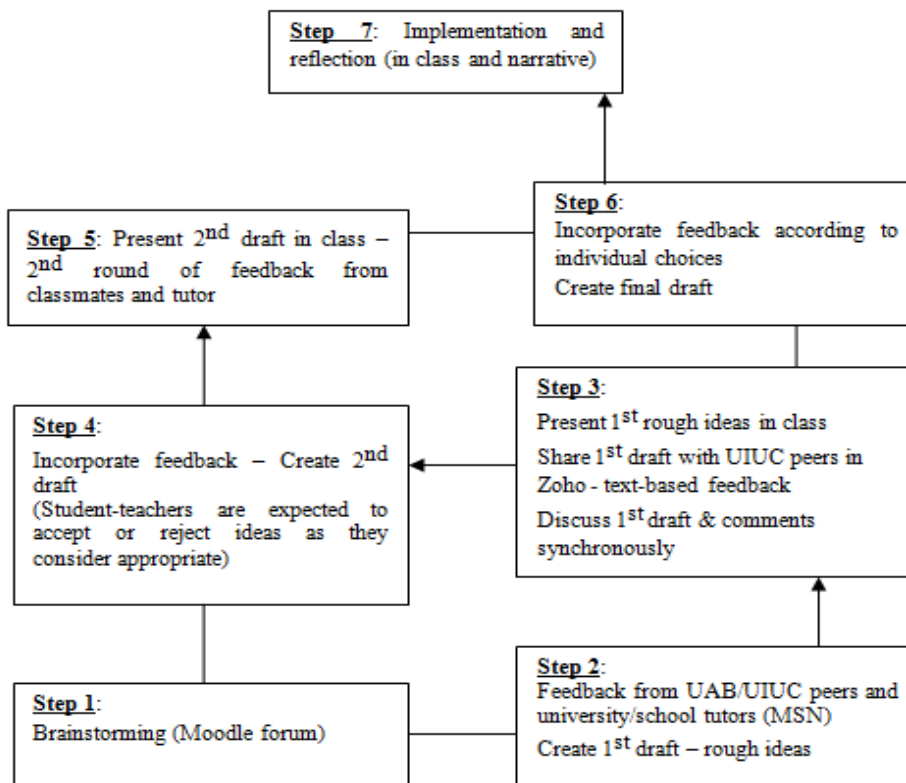


Figure 7: The process of designing the teaching sequence

8.5.2. Podcast unit

The activity of designing a podcast was a mini example of an instructional sequence, oriented towards the creation of a short video/audio podcast and follow-up pedagogical activities around a linguistic phenomenon of their choice. The collaborative interaction for deciding on topic, content and materials and eventual design was carried out in Second Life (SL). The point of this task was to create more collaborative interaction (versus dialogic feedback on individual teaching sequences) and to focus students on working together online as well as becoming familiar with new technological tools (creation of a podcast).

As workplan, the podcast implied more student-centeredness and more autonomy for the students to work with minimum intervention by the tutor, whose role was to give

instructions as guidance only. It was meant to give the student-teachers another opportunity for the design of teaching material, thereby revealing prospective teachers' maturity at planning, designing and critically reflecting on teaching material and practice and conceptual development regarding communicative language instruction. It could serve as a 'mirror' of all their competences and knowledge up to that moment as well as another developmental step in the professionalization process.



Picture 5: Caterina's Second Life chat meeting

On this occasion, the UAB student-teachers had the main role in designing the teaching activities to be used with the podcast since they were going to be implementing the activity. In the tutor's words, UAB student-teachers were to be the 'pedagogical experts', whereas the U IUC student-teachers would be the 'technological experts' in charge of the manufacturing the podcast. This division of labour was aligned with the programme and course requirements and gave the UABs more space to take charge and 'act' on their knowledge and skills up to that moment.

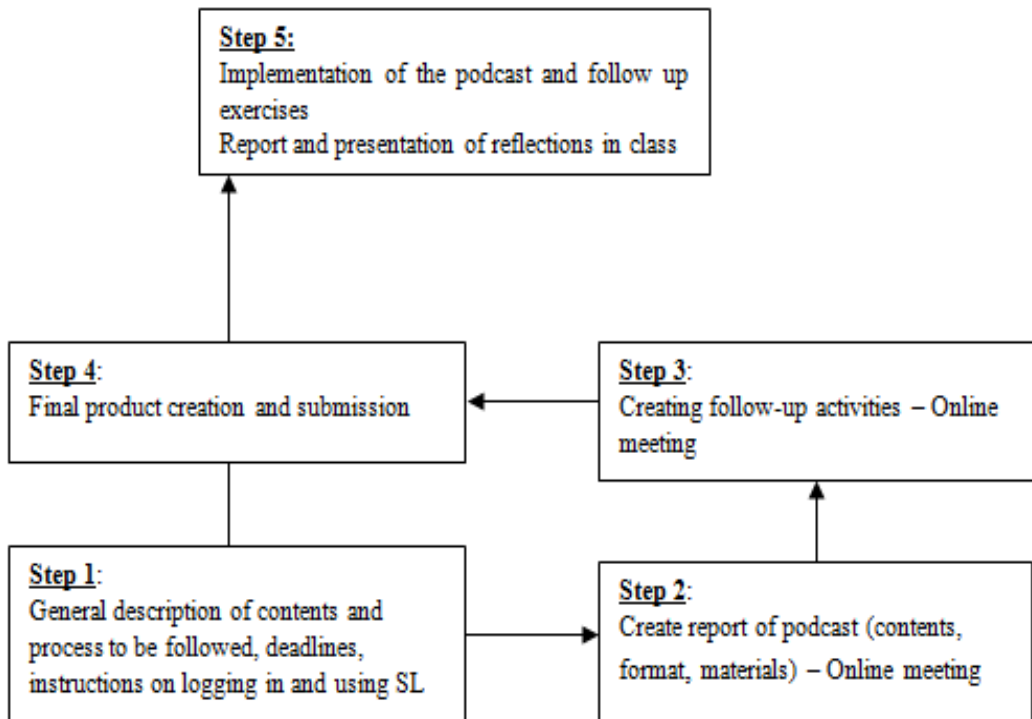


Figure 8: The process of creating the podcast

8.5.3. E-Portfolio

According to the formal curriculum, the student-teachers at the end of their final year of teaching degree were required to present a report accounting for their practicum learning experience. The theme for this group, chosen by the university tutor, associated with this report was “My trajectory as a teacher” and aimed at encouraging a “self-dialogue” and critical reflection on their overall experiences at the various stages of their practicum. Through this reflective practice, the student-teachers were encouraged to identify and self-evaluate their learning as individuals, teacher trainees and future teachers.

The creation of this portfolio was a year-long process. At the beginning of the course, the student-teachers were required to write about the school context in which they were working, keep a journal of the “hot moments” of their observation period of experienced teachers at the school and synthesize the main points that they thought relevant to the task of educating children. What is more, they were required to create a section to gather and present physical teaching material they became acquainted with during their school experience and found useful for teaching primary e.g., puppets, books, stories; they named this section “My tool-box”. Thus writing the portfolio was a self-oriented process, aiming at documenting learning throughout the course and contribute to the student-teachers’ self-reflection skills by encouraging them to write about important incidences at the school, describe and think about their learning process on a regular basis as they went along. They were also required to write about the process of negotiation that mediated the design of their final teaching plans (teaching sequence and podcast); relate their initial teaching goals and the contributions of the social actors involved in accomplishing those goals i.e., classmates, tutor and virtual partners. Finally, upon reaching the end of the practicum, the student-teachers were required to make a synthesis of their overall experiences through self-reflection regarding their past, current and future as EFL teachers in primary education.

It is also important to note that the format of this portfolio was actively negotiated between the university tutor and the student-teachers at the beginning of the course. The tutor proposed the online format using the Zoho wiki application and the student-teachers agreed that this format would be more developmentally productive than a conventional paper report or a CD rom. Given that the student-teachers were unfamiliar with the wiki concept and wiki technology, they welcomed the opportunity of a hands-on experience with the wiki in order to learn about and gain confidence with this tool.

9. Strategic planning skills

Overview

This chapter relates to the third high-salience category that emerged from the data and was initially labelled “learning to plan objectives” and more broadly reformulated into strategic planning skills. This category was coded 64 times in a total of 649 references.

This chapter first relates end-of-year reflections of the 3 focal student-teachers previously selected. These productions denote the development of know-how to strategically plan instruction, within the objectives and goals set by the general (communicative) paradigm of instruction, and within the parameters of the national and Catalan curriculum (this is discussed in the product-oriented section that specifically looks at final output). The curriculum requires student-teachers to be able to design, plan and evaluate teaching and learning processes both independently and in collaboration with other teachers and professionals. By looking first at the end-product, we are able to pinpoint competences that can then be traced during the development process (data stemming from *in situ* moments). Thus, following on this, the chapter recounts how this development emerged through guided participation in multimodal interactions, again in the three focal cases previously

selected (process-oriented section). Specifically, the process-oriented sections examine the guided processes that underlie the development of cognitive tools for thinking and technical language for synthesizing, visualizing and sequencing communicative-based and competence-oriented instruction in three selected individual cases.

9.1. Natalia's case

Natalia was teaching early childhood education and specifically 3-4 year old students. During her previous university studies she was used to working with older students, this posed a challenge for her, an issue that she brought up repeatedly throughout the practicum period. Natalia had no previous experience in teaching very young language learners (henceforth VYLL) and she stressed to her peers the fact that teaching this age group of students was far out of her comfort zone. She openly acknowledged that 4 year olds was a group of students with specific needs that required specialized methods of instruction and explicitly stated that she needed all the help she could get. Initiating her planning, she faced the challenge of specifying and articulating realistic language objectives for the VYLL classroom. She stated: “For this reason I wanted to ask you because I haven't worked with young young children so I'm not used to... it's gonna be difficult...” (f2f university transcript, 3 November, 2009).

9.1.1. Product-oriented data

At the end of the practicum, Natalia emphasized her newly developed competence in designing didactic material for the very young age group of students. According to her, her designs were strategically targeted at their special characteristics, needs and interests – features that she had mentioned at the beginning as being a challenge for her. In her final

reflection, Natalia reports on both the design as process which forms part of a wider network of people, practices and activities and implementation, and she discusses features such as flexibility, enthusiasm and dynamization, which she considers essential for teachers of VYL classroom and which she feels she has learned.

Extract 1:

1. A good language teacher knows how to plan lessons. He can:

- **Structure lesson plans and /or plan for periods of teaching in a coherent and varied sequence of content (1)**

I believe that this year I have learnt a lot in this competence. I have planned a coherent sequence linked with the school context and children interests. My teaching sequence, the winter was related to what children were doing and they could relate knowledge. The winter.

- **Design activities to make the learners aware and build on their existing knowledge (2)**

I think I have also improved in this competence, as I designed the teaching sequence taking their previous knowledge into account. Moreover, when designing the podcast, I also took it into account. I have tried to use the scaffolding theory and build knowledge using their previous one.

2. A good language teacher knows how to conduct a lesson. She can:

- **Be flexible when working from a lesson plan and respond to learner interest as the lesson progresses, especially by being responsive and reacting supportively to learner initiative and interaction (1)**

This competence has been one of the most difficult ones that I have had to develop during my teaching sequence. I have had to change, adapt and improvise during all my teaching sequence. All children are different, they behave in different ways depending on the weather and the class also take up a crucial role. I have learnt to adapt my planning to them and not to be obsessed about time when implementing.

- **Start a lesson in an engaging way and then keep and maximise the attention of learners during a lesson (2)**

With young children I have learnt to be more dynamic, energetic and enthusiastic, as children absorb all our motivation. I have also learnt to use routine resources to change from an activity to another, to plan short activities that involve all students and having lots of changes of rhythm. For example, after doing a moving activity we can move to a relaxed one, then we can change the sitting of the pupils, etc.

In extract 1 (taken from the student's final wiki), Natalia documents that she learned to contextualize her planning around students' needs, interests and previous knowledge. In doing so, she indicates the development of knowledge about her (very young) students',

which she previously did not have. Specifically, she states that she became competent in planning “coherent” lesson plans, embedded in the wider school context and instruction (point 1); in eliciting students’ previous knowledge and building on it to enhance language production (point 2); she developed understanding of the interests of very young learners (point 3) and gained knowledge of appropriate methods for teaching this specific age group of students, taking into account their cognitive capacities (point 4).

Extract 2:

3. A good language teacher must know her context. She can:

- **Integrate cognitive skills into her lessons (problem-solving, communication skills, research skills, etc) (1)**

About this, I can say I have learnt a lot this year by observing Marta and by my own experience. With experiments in class, children have had the possibility of observing, guessing what will happen and see the results. For example, Marta did it by bringing to class some camomile tea and warm water when doing a story about camomile. I also did it in my teaching unit, when I brought ice cubes and children had to guess what will happen with heat.

I also think I have learnt to integrate communication skills in the classroom, by means of routines, introduction of new structures and vocabulary, etc. I think my podcast is also an example of introduction of communication skills, where children have to use a question (“*do you like..?*”) in order to communicate with the caterpillar, and it provides an answer to their question. Moreover, with the Action Research, I learnt that when the teacher wants to introduce new vocabulary or a new structure, it is more useful when it is carefully planned and as a consequence, it will have better results.

I now firmly believe that the most important to teach a language is learning it to communicate. So I try to plan activities where children have the opportunity to practice these communication skills.

In extract 2, Natalia relates a gradual development of the concept of authentic language learning. As she states, authentic learning for her involves real world practices and material (such as the use of ice-cubes to help students conceptualize sensations). She used these materials and resources in both her teaching sequence and podcast unit. Natalia considers that such material and practices foster opportunities for students’ critical thinking in the

classroom. As she states, they allow students “the possibility of observing and guessing” (paragraph 1)

At the end of the year, Natalia also integrates communication as an essential part of her teaching. As this extract demonstrates, Natalia documents learning to promote natural communication and support for the students to make connections between real-life artefacts (the caterpillar – a talking character in the podcast she created with her virtual partner) and use of the language (to inquire about the food likes and dislikes of the caterpillar).

Natalia also related that, for her learning to integrate communication skills in pedagogical practice included both strategies for explicit language instruction through routines (as she stated above), and implicit natural communication in the classroom, using the target language as the medium of all classroom interactions. She speaks about her “achievement” of establishing English as the communication code in the classroom (rather than Catalan and Spanish). Her descriptions exemplify the creation of a space for both informal and formal language teaching and learning.

Extract 3:

4. Create a supportive atmosphere for speaking

I have improved in this competence, as now I am more aware of the importance of speaking in the target language most of the time, and create a great atmosphere to enjoy the class. This will lead little by little that children improve in their listening skills and be more relaxed to participate in the target language.

In my eyes, I have improved a lot in this competence, as I have achieved the habit to speak almost always in the target language in class. I try to be a model of language in terms of pronunciation, accuracy and fluency by studying the language outside the class. By being more self-confident with the language I have achieved a listening and speaking routine in the English class, as students see the language as the normal language used inside the class. I have been able to put it into practice more in my English teaching outside school (in my current job).

In extract 3, Natalia describes how she intentionally made the effort to establish this space of instruction, and become a model for her students. She highlights how she consciously and carefully planned activities to allow for language skills to emerge (from listening to speaking). Natalia echoes the parameter and concept of authenticity when she talks about a “great atmosphere” that would promote authentic use of the target language and in turn stresses the importance of allowing authentic communicative opportunities in the classroom. This outcome can also be related to her peers’ suggestions of fostering natural communicative events in the target language by asking the students questions in English, and to the tutor’s distinction between implicit (not evaluated) and explicit (evaluated) linguistic content of instruction (see extract 4a) and the idea of the teacher as a model of desired outcomes (see Chapter 10).

At multiple times throughout the course, Natalia expressed discomfort with her own language proficiency and acknowledged that she needed to work on her English. Arguably, this discomfort was also a factor impeding her engagement in dialogue with others. In essence, the requirement to communicate with Americans, something to which Natalia initially reacted negatively, provided a context to ease her embarrassment and foment a growing self-confidence, as well as ensuring a context to practice English language skills in real life context, and an incentive to improve her English (see Chapter 10).

9.1.2. Process-based data

In relation to the above, this section examines the underlying process that led to the outcomes displayed in section 1.1. It illustrates the interconnected activities between face-to-face and virtual interaction that fomented Natalia’s growing understanding of how to

establish clear and achievable (realistic) objectives for VYLL. It begins with an outline of relevant face-to-face episodes where features from one of the three domains began to emerge. These same features are then ‘picked up’ by the student-teachers as part of their interaction with their online peers. For instance, Event 1 (f2f) highlights how the need for explicit articulation of language learning outcomes (not just general themes) moves to extended exploration of how to set age-appropriate objectives (as seen in the learning event 2, virtual), within the communication-based competence-oriented paradigm; and ultimately leads to Natalia’s gradual mastery of cognitive tools for thinking and strategically planning didactic material for the classroom.

EPISODE 1: DEVELOPING STRATEGIC PLANNING SKILLS FOR THE VERY YOUNG LANGUAGE LEARNERS’ CLASSROOM

Starting November 2009, the student-teachers became involved in the presentation of their first drafts for teaching sequences, which they were expected to prepare individually, drawing on previous university instruction and the knowledge they accessed through immersion in the school context. In this light, the task of presenting their teaching drafts was a first attempt to contextualized teaching practice, followed by strategic feedback (further guided by more knowledgeable others).

EVENT 1: CLASSROOM INTERACTION (NOVEMBER 3, 2009)

Tutor scaffolds reflection on realistic CL/CB instruction: Verbalizing objectives

Natalia originally planned a large amount of activities to teach an array of language structures, which were evaluated as “not realistic” by face-to-face peers and university tutor.

Extract 4a below represents the first part of this long university discussion between the student-teachers and the tutor, during which the tutor uses Natalia’s unit plans as the context to model the process of planning and what it specifically entails for the teacher. This was the first occasion in which the student-teachers were introduced to the concept and practice of designing didactic material for the foreign language classroom. As the tutor says, this process had not been formally discussed in the Methods class. At this moment, the conversation takes the form of an interaction between Natalia and tutor.

Extract 4a:

- 1 UT i didn't ask the question properly that's sort of... we haven't talked
2 about planning yet in in TEFL and so you're... i can see...
3 understand your confusion. that's what you as a teacher say my aims
4 are for the students to do this
5 NAT Yeah
6 UT yeah? And I'm asking you what do you want and that's a question
7 again that everybody needs to think about what's ... what do you want
8 them to learn? you understand the question? When they're finished
9 you... you need to be able to say well...i hope that they will learn this
10 this and this
11 NAT about concepts? I expect them to learn about um...well have a
12 general idea of the snow and the... winter and they can eh understand
13 the difference between cold and hot and... and to learn some warm
14 clothes because i'm going to bring them... some warm clothes and
15 to learn some vocabulary of clothes
16 [...] Well my aim is to rel- rel- to... rel- *relacionar*
17 UT Relate
18 NAT yeah relate the cold colours with the winter... on the photographs that
19 I'm showing to them
20 UT well if you make a list with everything you're asking them to be able
21 to do you're asking four-year old kids to be able to repeat... you're
22 asking them to understand the difference between the seasons autumn
23 winter this difference between hot and cold making comparisons cos
24 you are comparing this one is hot this one is hot you're doing
25 comparisons...you're introducing at least six new vocabulary words so

26 you're asking them also to learn how to associate colours with
 27 feelings... it's too much. I think
 28 NAT so it's better to X on cold colours [...] it's enough or...?
 29 UT I would think so. because if you ask them then to separate
 30 oh this is a hot colour this is a cold colour
 31 NAT no it's only em... the photograph we can see blue and take only this
 32 colour and we take the colours that it's they are in the photograph and
 33 XXX we'll use the colours to...
 34 UT okay so implicitly you are teaching it which is fine I mean... we
 35 do a lot of implicit teaching but we don't expect them to... but the other
 36 thing is if you say implicitly i'm teaching this and I expect them to
 37 understand it and to know it you're introducing the concept that's fine...
 38 the whole time you're introducing concepts when you're introducing
 39 how to say hello how to say goodbye you're introducing concepts that
 40 you are not testing them on when you're not setting as an objective in
 42 that case yes but if you wanna test them on it... X i don't know

Natalia is asked to articulate her ideas of desirable learning by the students (lines 1-4; 6-10). Her articulation consists of general abstract visualizations of learning based on the theme of winter and related vocabulary i.e., learning hot and cold colours, seasons and making comparisons between them (lines 11-15; 16; 18-19). Natalia appears to be lost in a quantity-quality dichotomy, which the tutor points out in lines 20-27 and Natalia herself admits in line 28. The university tutor instigates Natalia's initial reflection on the need to set priorities and distinguish between implicit and explicit goals and activities i.e., actionable, measurable and assessed teaching (lines 34-42).

The tutor's intention is to provide scaffolding and model the cognitive tools for promoting student-teachers' reflective skills on the content-context relationship. The tutor emphasizes the need to consider the contextual contingencies such as the age-group of students and their cognitive level in order to determine the extent to which Natalia's plans are realistic.

Further on in the same discussion, the tutor invites Natalia (and the student-teachers) to envision the language learning they aim at in their classroom.

EVENT 2: CLASSROOM INTERACTION (NOVEMBER 3RD, 2009)

Learning language to formulate objectives

Extract 4b:

- 43 UT when you say I want them to know vocabulary words which ones? You
44 gotta be able to say...
- 45 NAT scarf hat...
- 46 UT but do they have to say it? Or... just recognize it?
- 47 NAT well at first recognize and at the end in the final... in the two boxes
48 when we are going to tidy up they are going to take the... scarf and put it
49 in... from...
- 50 UT well you make a list scarf boots hat gloves coat what else? [...] I've got ten
51 words that I want them to be able to one comprehend cos comprehension is
52 different from... from production. You could say I want ten words
53 comprehension and you can test that
- 54 NAT X comprehension you mean
- 55 UT I want comprehension? well ten words comprehension and how will I
56 know if they've comprehended when I hold up a scarf I say hat? And they
57 say noooo that's comprehension yeah? You can do that and then you say
58 okay and then I want them to be able to say hot it's hot and it's cold
59 reproduce I don't know or... reproduce it's hot it's cold plus two or three
60 words. I'm happy with two or three words you've got to decide when
61 you're making your assessment what you're happy with you know. I think
62 it's enough if they're able to do this and this is how...I'm going to do it.
63 I've got the two words I want them to be able to show me...
- 64 comprehension and you'll figure out how they'll show you comprehension
65 and I want them to be able to reproduce... this yeah? Does that make it
66 easier for seeing how you do assessment? I mean you all need to ask
67 yourselves these questions you know I mean think about some of
68 your... and the question is when you go to the end what do they need
69 to know?[...] when you say learn vocabulary you'll see it in teachers'
70 books all the time and what in the world does learn vocabulary mean?
71 Does it mean recognize a word that is written? recognize it when it's
72 heard? Is it oral written comprehension both? reproducing it? reproducing
73 it correctly in this context? Learn vocabulary I mean those words are
74 very... uh... tricky because they look so simple you know? Do they know
75 it because they can repeat it or they may not repeat it in the right way or in
76 the right place or use it correctly so you gotta think what this learning
77 vocabulary mean and once you know that you can never I mean you've got
78 to decide for me I'm happy with this this is what I want
- 79 NAT Okay
- 80 UT it's your choice cos you're the teacher, yeah?

The tutor introduces language and at the same time models a way of thinking about the process of planning linguistic objectives, helping to orient and encourage student-teachers towards appropriate and measurable learning objectives and express them with clarity (lines 46-66). She breaks down the concept of language learning content into tangible recognizable and measurable actions of learning i.e., recognition, reproduction, comprehension, production which would constitute evidence of success. Put simply, the tutor promotes reflection on what learning would look like in practice (lines 46; 50; 55-66). This labeling reflects Bloom's classification of learning outcomes in concepts in order to be able to recognize and understand the type of learning that takes place as were discussed in the Methods class. The idea of teachers' identity as decision-makers and designers of experience is also put forward in this extract with the tutor's explicit prompt to Natalia – and in *extenso* everyone – to assume this role (Mead,1934; see also Reiman, 1999). Student-teachers are prompted to first make decisions about the content they wanted to teach and second create appropriate conditions for teaching it (lines 66-80).

Extract 4 is pedagogically and cognitively interesting for 4 main reasons. (1) It helps to specify the content of instruction from the abstract to the concrete; (2) it involves explicit modelling of objectives using language underlying behavioural attitudes expected from students as cognitive tool to regulate student-teachers' thinking; (3) it helps the student-teachers develop awareness regarding their responsibility to learn to formulate objectives through language (lines 56-87); (4) it prompts student-teachers to assume an active/guiding role in regards to their practices (line 89).

This particular instance of tutor scaffolding is the first instance in this practicum in which they were required to concretize specific linguistic objectives for the students and make their own decisions taking into account their school observations and *in situ* understandings of the context. This interaction was followed up by virtual interactions, which complemented, reinforced and expanded this first round of scaffolding regarding designing skills.

EVENT 3: VIRTUAL INTERACTION (OCTOBER 29TH 2009)

Virtual peers question timing

Towards the end of the classroom discussion, Natalia relates another line of feedback on the same aspect of her plans, this time coming from her virtual peers. In doing so, she relates a first example of the complementary and reinforcing role of virtual interactions.

Extract 4c:

81 UT Any other comments? well it's a good start it's a good start I hope
82 that you get lots of feedback from your peers and that it will be useful
83 NAT They also said be realistic on time
84 UT Yeah. well we tend to get carried away but that's normal you start oh
85 that would be fun oohhh that would be fun and you want to put it all in it's
86 normal right? more than anything it's so that you don't feel stressed when
87 you're doing the X oh god I'm not even half way through ahhh you know
88 it's stress yeah? any questions for them?

In this extract, Natalia refers to asynchronous feedback that she got from her virtual peer advising her to be more realistic in her teaching goals. She acknowledges the interconnectivity of various sources of feedback, university and virtual, pointing out the

need to be realistic in her objectives and take into account contextual aspects i.e., students' level and time provided (line 83).

EVENT 4: VIRTUAL INTERACTION (DECEMBER 10TH 2009)

Peer scaffolding: Peer suggests focus on age- appropriate inputs and objectives

Natalia's online synchronous meeting reinforced the arguments made in the classroom.

Sook, Natalia's UIUC virtual peer, who appears as [쿠수] in the MSN conversation, repeats ideas that had already been pointed out before and this time focuses the need for realistic age-appropriate instruction on a specific part of the unit.

Extract 5:

1	jun dice:	I think for the second session, comparing the hot and
2		cold may be interesting but it might be better to just
3		focus on the cold
4	[쿠수] dice:	Yup
5	jun dice:	i think someone else mentioned this...
6	[쿠수] dice:	for 3 lessons
7		and I also thought I'm no expert in early childhood education,
8		but I do have a feeling that 3 songs in
9		30minutes may be overburdening
10		(Since children have short attention span)
11		[...]just petty concerns
12	[쿠수] dice	I don't believe in overburdening inputs, that's all
13	jun dice:	not petty
14	Natalia dice:	i think if they are new not, but if they are familiarized is
15		Different
16	[쿠수] dice:	yup yup

Natalia's UIUC peers, qualifying their statements by indicating that they were not experts in early childhood education, suggest that Natalia takes into consideration that her very young learners would need support to understand some of the concepts. Looking

specifically at the language of feedback used in this online discussion, the peers engage in a professional-like discursive activity with the intention of helping Natalia to narrow down her teaching goals. They provide her with concise feedback targeted at specific aspects which they had previously identified as problematic e.g., 3 songs (lines 6-8) could possibly be ‘overburdening’. Specifically, the two peers indicated and exemplified the fact that very young learners have low capacity for sustained attention and remaining on a task. Sook uses a combination of technical terms i.e., “short attention span” and qualifiers (e.g., “overburdening”) to exemplify the content of the arguments and support the validity of her claims. At the same time, she mitigates the effect of her statements with another qualifier “petty” (lines 9-11). This feedback instance, using professional jargon in combination with qualifiers and personal accountability seemed to work as another prompt for Natalia to reflect on objectives of her unit and to concretize and specify them from the perspective of the ‘short attention span’ of her students. From this, Natalia engages in critical thinking about what would be realistic and non-realistic learning goals as she does not accept their suggestions completely. She reflects on her teaching plans and shows some hesitation about her peers’ suggestions of narrowing down classroom activities (lines 14-16). She argues that the songs she proposes are ones that her students are familiar with, which would make having three songs as part of the instruction a realistic goal to reach.

A comparison of the two events of interaction (classroom and virtual) indicates the interconnectivity between the same idea expressed in two different modes and following different interactional patterns. Both interactions targeted the cognitive load underlying Natalia’s planning. On the one hand, the tutor’s discourse was more reflection-oriented prompting the student-teachers to ‘envision’ their plans and make decisions on what they

wanted to teach and whether they were realistic in terms of context. In this sense, the intention of the face to face meetings seemed to be more oriented towards long-term development of reflective skill, intending to provide the tools for their own decision-making. On the other hand, the virtual feedback by Natalia's peers was more direct and more precise in the sense that it referred to particular sessions of the unit plans, affording more immediate solutions to the problematic aspects of the teaching unit. Overall, the two types of feedback were complementary in providing cognitive tools for thinking about and reasoning on the whys and the hows of teacher's decisions, underlying the conceptual framework of CB/CLT instruction.

EVENT 5: VIRTUAL INTERACTION (DECEMBER 10TH 2009)

Virtual peers suggest introduction of communicative events with concrete examples and highlight teachers' role in supporting students' understanding

From the very initial stages of her design process, Natalia's virtual peers oriented her thinking towards communicative language instruction and suggest ways in which she could introduce communication to the VYLL classroom. This feedback seemed to contribute as to Natalia's learning to introduce communicative scenarios in the classroom (see extracts 2-3 in section 9.1.1 above).

Extract 6:

- | | | |
|---|---------------|---|
| 1 | jun dice: | in the 4th session, it's a great arts and crafts activity but how about adding some language content to it? |
| 2 | Natalia dice: | i dont usually deal with young children so its a challenge |
| 3 | | for example? |
| 4 | jun dice: | like having winter vocabulary on the worksheet |
| 5 | [쿠수] dice: | or ask students leading questions like: what is this you are |
| 6 | | making? |
| 7 | Natalia dice: | the problem is that they cannot read |
| 8 | jun dice: | oh i see |

9		ahaha
10		that's right
11	[쿠수] dice:	and ensure their understanding of snow
12	Natalia dice:	Ok
13	[쿠수] dice:	right
14	Natalia dice:	leading communication events
15	[쿠수] dice:	yup
16		leading question and make it sound natural\
17		may work
18		they will still be working
19	jun dice:	Yea
20	[쿠수] dice:	but you just go talk to them
21	Natalia dice:	i think this can really work in order to be more useful for them
22	[쿠수] dice:	yup
23	Natalia dice:	thanks!

In this instance, her virtual interaction focuses on the communicative component of instruction. In line 2, Natalia openly acknowledges the challenge teaching very young learners constitutes for her. Her limited knowledge of the cognitive and emotional particularities of 4-5 year-olds seems to restrict her from ‘envisioning’ communication in the FL in the VYLL and so she asks her peers for examples about how she could introduce “language content” to the VYLL classroom (she had planned for activities involving craft work without any real communicative tasks involved).

Although Jun’s suggestion to provide written support to the learners does not seem to fit with the cognitive level of 4 year-olds, Sook provides an example that enables her to foster a natural type communication with very young learners (lines 5-6). Sook emphasizes the role of the teacher in promoting natural communication in the classroom (lines 16-18; 20). At this point, Natalia concludes that this type of modification to her planning would make the instruction “more useful for the students” (line 21). Natalia explicitly appreciates this extended dialogic mediation from peers (line 23).

In this instance, the virtual peers, work as a group to construct their collaborative frame of reference regarding the general vision of language teaching, focusing on the concept of communication. Also working within the CB/ CLT, paradigm and curriculum they use the premises of this model as guiding concepts to construct their arguments; the UIUC peers share their vision of what communication should look like in a very young learner classroom. Returning to Vygotsky's ZPD, the UIUC peers suggest practical ways of fostering and generating communication in the classroom, thus helping to expand Natalia's resource-kit of legitimate communicative practices. At the same time, they trigger a "proximal proficiency goal" for Natalia (Thorne, 2004: 61) in the sense that it reveals achievable possibilities for FL communication in the VYLL classroom.

Sook also suggests that Natalia ensure the students' understanding of snow (line 11). In doing so, Sook brings up the question of "embeddedness" of instructional content i.e., specific winter concepts in real-world context and reiterates the teacher's supportive role in the classroom. In the real-world context of Barcelona city and outskirts, snow is not common, and Sook is implicitly underscoring a comparison of student life-experience with snow in the US and Barcelona.

Again, this discussion parallels and complements an earlier university discussion and one of the tutor's reflection-oriented comments. In that earlier stage, the tutor raised the same issues as Sook had discussed, both dealing with the same session of Natalia's unit. A comparison of these two discussions helps discern concepts and ideas expressed in different interactional patterns. This discussion was the following:

EVENT 6: CLASSROOM INTERACTION (NOVEMBER 3RD, 2009)

Tutor's prompt to ensure and support students' understanding

Extract 7:

1 UT um... i've got a question and this goes for all of you when you're
2 thinking... you got four year olds... and you've embedded which we'll talk
3 about embedded learning embedded it inside this idea of autumn... winter
4 but four year olds in Barcelona... have probably not experienced snow
5 NAT yeah I agree
6 JAU yeah that's true
7 UT they may have a hard time connecting the idea of what is snow and
8 and my question was how do you support them to understand what snow is
9 and then then then you answered my question! in the fourth session you're
10 going to do the art and crafts! my question is whether that should be
11 introduced first i don't know. cos the whole thing is based on... the idea of
12 winter and snow which is not very realistic! winter in barcelona i don't
13 know cos when you... when we're interested in language mostly we have to
14 think about the concepts that are introduced with that language! what do
15 you think? would it make a difference? [silence] or wouldn't it? can you
16 remember when you were four years old and somebody talked about snow
17 could you understand it? i can't remember when i was four so... [laughing]
18 MAR perhaps they can bring a xx photographs in the class because xxx
19 snow xxx so not the snow
20 UT not like that (?) [funny voice]
21 MAR but they can bring the photos and compare the...
22 JAU no but most of them... they have gone to the mountain they've gone
23 to andorra or maybe the Pyrenees...
24 UT do you think so?
25 JAU yes yeah when we were young we did i think there yeah and xxx or
26 andorra yeah?
27 CAT yeah there are some students who go to the XX
28 UT alright alright so it's a silly question of mine okay so they know snow...
29 JAU in the case of the immigrants maybe...
30 UT alright no no i'm_ that was my question and you've answered it and
31 good i didn't know that they've been introduced to snow I didn't know that
32 NAT well for sure there are some that don't...
33 JAU yeah
34 UT but if you've got a group...as they're saying you've got a group that
35 does then they can help the others my question was how do you support
36 them to understand to conceptualize snow but that's covered yeah? okay
37 good uh...

The tutorial that took place on November 3, 2009 related the need for an empirical link between the previous experiences of very young learners and instructional aims (lines 1-5). In the classroom, the tutor raises the issue of VYLL knowledge about the topic introduced and emphasizes first the role of the teacher supporting the activity (lines 8-9), which also Sook points out in extract 6 above.

Based on their cultural knowledge of the context and own experience as Catalan students living in Barcelona, the student-teachers, through the voice of Jaume, estimate that understanding the concept of snow will not pose problems for the Catalan students in the classroom, who have probably been to Andorra or the Pyrenees, as they (the student-teachers) had (lines 25-26). They suggest, however that it might pose problems for immigrant children, a reality of a context of cultural diversity of Catalonia (lines 22-23). In this context, the tutor emphasizes the role of the teacher as a facilitator of opportunities for learning and supporter of knowledge development; specifically she suggests group work to transform the possible limitations of different social and cultural experiences into valuable resources; at the same time, she points out the potentially beneficial aspect of cultural diversity in generating opportunities for dialogic learning (Moore, 2011) when “a group [that understands] then they can help the others” (lines 34-37).

The solution to this issue seems to be that the teacher should support their learning by bringing in photos that would make a straightforward distinction between winter and summer. In extract 6 above, Sook comments on the same aspect of the unit and goes further to suggest the introduction of communication in this session as part of language learning.

Summarizing, the enhanced feedback contributed to increasing awareness of the relationships between content and context, complexity of task and students' cognitive level and age, and subsequently the bridge between quantity and quality, and the role of the teacher in pacing, critically organizing and sequencing the activities. In Natalia's case, this expanded feedback seemed to hold special relevance and value because this feedback was specifically targeted to teaching early childhood pupils, about which, as mentioned before, Natalia felt insecure and hesitant to apply communicative language teaching. For one, this cluster (episode) of multimodal interactions indicates that the online environment generated more discussion and cognitive support to the end of designing contextualized, realistic, communication-based, and competence-oriented teaching. At the same time, dialogic interaction, distributed between face to face and virtual modes, promoted essential components of legitimate teaching pedagogy and encouraged the development of reasoning processes.

Coming full circle, extract 8 is taken from Natalia's final reflection (in wiki format), following the implementation of her unit. At this moment, she appears cognizant of many aspects of early childhood teaching, echoing specific characteristics of very young learners that teachers need to take into account when planning instruction.

EVENT 7: SCHOOL IMPLEMENTATION (JANUARY-FEBRUARY 2010)

Trial and error: It was too short for their short attention span, solution?

Extract 8:

When I told the story, I allowed students to guess what was going to happen next, to tell some facts in the story and to come to the digital board to point to what I said. I could

assess in general, if the concepts were clear (hot/cold, warm clothes). It worked but they were so excited that I could not tell the story properly. Perhaps it was because of the time, I did it too long for their short attention span. If I had done a general revision of the story and not focusing on details, it may have worked better. I tried to have many volunteers coming to the board, and it meant lots of P4 students being sat down only observing. Very young children need short activities because they have short attention span. It is preferable to have 3-4 short activities than 2 very long ones. They cannot be focused so much time in a task. They cannot be focused so much time in a task. [...] Improvising also helped me to relax myself, to be creative and to observe the right moments to ask for production. I used some relaxed activities (as artcraft activities) as a way to ask children questions about the activity, to review concepts and to allow production.

Specifically, this extract conveys Natalia's reflections on the outcome of a storytelling activity that she did in class. Specific indexicalities of her multimodal interactions can be traced in Natalia's account of experience. This cognition, as it is articulated in her discourse, indexes her uptake and authorship of thoughts, ideas and language from her interactions with virtual and class peers and tutor. For instance, her use of the technical construct of "attention span" (see extract 6 above) to evaluate and understand a weak point of her implementation. Specifically, she reasons on this outcome by relating the cognitive capacity of very young learners and her non-realistic estimation of time in the activity ("Perhaps it was because of the time, I did it too long for their short attention span"). At the same time, she demonstrates ability to propose alternatives for improving storytelling in the future. Specifically, she suggests doing "a general revision of the story and not focusing on details", which, as she states, may lead to more successful classroom practices and potentially enhance language learning.

On a similar vein, Natalia's reflection indexes the communicative aspect of teaching, as it was discussed in her virtual meetings.

EVENT 8: SCHOOL IMPLEMENTATION (JANUARY-FEBRUARY 2010)

Concretization of concepts in classroom practice: Leading communicative events in classroom teaching

Extract 9:

There were some changes I did meanwhile implementing. These changes were improvisations of necessities I observed during the activities [...]. One interesting thing I changed was the way to melt the ice-cubes. It was very interesting to guess what will happen the next day when children return to class. Next day they were very excited and telling me: Now it is water!, as the snowman! This motivation allowed me to take profit and ask questions about the process. It was a way of allowing critical thinking, a moment to reflect upon the results and the reasons.

In Extract 9, Natalia reflects on a successful point of her implementation, involving students' production in the foreign language emerging through "natural communication", which she initiated in the classroom. This latter outcome, as she states, was an improvised decision that she made while implementing her teaching plans. She prompted her students to critically think about their observations and reasons underlying them by asking the pupils questions about their observations. According to Natalia, this outcome was facilitated through the use of real-life artefacts i.e., ice-cubes, which she had left to melt in order to illustrate the effect of heat on ice as part of teaching the characteristics of the winter and summer, which was the topic of her teaching sequence (see also section 9.1.1., extract 1).

At this stage, Natalia demonstrates ability to self-regulate her thinking and reasoning and displays her own theorization of successful foreign language instruction. Her theorization involves natural communication, which she promotes by asking questions about the students' findings. For doing so, she uses cognitive representations of the communicative classroom, which were previously other-regulated in her multimodal interactions by virtual peers (see Sook's advice in extract 6 above).

This episode of events e.g., moments where Natalia is encouraged to reflect on the timing of her activities (class and virtual), on the level of communication to be used in the activities (virtual), and the teacher's role in supporting the activity (class and virtual) all contributed to learning to plan and strategically implement her teaching.

Natalia drew on this knowledge to engage in a second planning and teaching endeavour within the academic instruction period. This time she was explicitly required to integrate (podcast) technology in CB/CL pedagogy. Event 9 (below) demonstrates how Natalia operationalizes the knowledge and understandings of teaching she had acquired to co-formulate objectives with her virtual peer and create a language learning environment in the VYLL classroom.

EVENT 9: VIRTUAL INTERACTION (MARCH 2010)

Externalizing learned concepts: Independent-like planning

This interaction took place during the second semester and also bears connections with Natalia's first semester learning to plan. Natalia was working with Imy on the design of a podcast-based teaching activity (one-session). At this stage of her development, Natalia externalizes her understandings and knowledge of designing didactic material for the

VYLL classroom. In this instance, Natalia is working on an equal basis with her American virtual peer.

Extract 10:

1 Natalia dice: Teacher goals:
2 To review food vocabulary of the book
3 To introduce new structure: Do you like? Yes I do/ No, I don't
4 anything else?
5 Im thinking that after this presentation I could do an activity
6 of letting them taste the different food and put into
7 practice the new structure
8 do you like it?
9 Work Work **sounds great!**
Work dice:
10 Natalia dice: do you think in another goal?
11 Work Work **nope, I think that's great**
Work dice
12 **with little kids its enough to focus on a few things and**
13 **I'm all about making this as easy as possible**
14 Natalia dice: with that can we see if they have understood the story?
15 i mean if they can relate something with it?
16 i dont know
17 well, forget about it its difficult to know lets move on the
18 next point
19 SWBAT
20 Work Work **Students will be able to understand the question being**
Work dice:
21 **asked them and give the appropriate response**
22 Natalia dice: perfect
23 to use their knowledge about the vocabulary of the story in
24 a context
25 Work Work **knowledge needed: some exposure to vocabulary**
Work dice:
26 **Yes**
27 Natalia dice: we are saying the same
28 Work Work **good! [...]**
Work dice:

In Extract 10, Natalia, now aware of the cognitive capacity of 4-year olds takes initiative in planning the activities (lines 1-6). She displays the general frame of the instruction e.g., creating an authentic relevant and meaningful setting for language use to emerge naturally.

She suggests bringing in real material i.e., food and using activities i.e., tasting fruit in order to practice the structure “Do you like” (lines 5-6).

Re-taking the concepts discussed in the interactions, (as they were presented earlier in this episode), Natalia and Imy negotiate the contents they are planning and agree on their adequacy for VYLL; they make sure that the tasks will not be overburdening for VYLL (lines 12-19), indexing interactions and Natalia’s trial and error’ conclusions (Events 1-8 above).

Natalia and her virtual peer (Imy) use their existing knowledge to formulate language learning objectives, specifying what students would be able to do at the end of the learning process (lines 20-26). On this occasion, the two peers work together and take turns in formulating objectives from the perspective of the students. Natalia’s evaluates this interaction as a dialogue between equals. She remarks “we are saying the same” (line 27), demonstrating that she is aware of the fact that they are working on equal terms. Imy responds affirmatively to this evaluation.

Overall, extract 10 depicts the two partners thinking dialogically to design a common task. They work on equal terms using teacher language and contextual knowledge to construct and formulate their goals and objectives of instruction. Significantly, in this virtual interaction, it is possible to see considerable development in Natalia’s application of language teaching concepts that had been, up to this point, mostly theoretical, along with a growing confidence in her ability to communicate as an equal peer with her virtual partners (an evolution that is relevant to relational aspects in teacher competences).

Taken together, extracts 8, 9 and 10 represent an ‘intertextuality of voices’; namely tutors’, class and virtual peers’, school teachers’, students’ contributing to shaping Natalia’s own voice. At this stage, Natalia demonstrates that she learned specifics involved in teaching early childhood education; specifically, language to describe the cognitive capacity of VYLL, which she used to reflect on her ‘trial and error’ activities. This indicates that her interactions with virtual peers and tutor in the classroom contributed to a dialogic construction of knowledge; in turn, they contributed to Natalia’s transformation from previously individualized to dialogic cognitive representations and implementations of teaching and learning (Chapter 10 is dedicated to sequentially analyzing events that contributed to this transformation).

Natalia’s following textual production demonstrates her mastery of the cognitive tools for thinking and planning communicative language teaching. This is discernible in the way she plans the assessment of the activity. The topic of assessment was thoroughly discussed in the university tutorial dedicated to Natalia’s teaching design. Back then, the student-teachers concluded that a self-reflective type of assessment for the teacher to evaluate the process and outcomes of her teaching would be a more realistic type of assessment for Natalia’s age group of students (this interaction is not displayed here).

EVENT 10: SCHOOL IMPLEMENTATION (APRIL, 2010)

Using learned concepts and strategies to evaluate own teaching: Concretizing concept of planning for improvement

Extract 11 below is the rubric Natalia devised in order to evaluate the success of the podcast activity. The criteria she defined for evaluating her teaching strategies and also her

own performance as a teacher in the second semester align to the comments received by her peers throughout the practicum.

Extract 11:

(Teacher) Assessment:

The activity explained before will be filmed and then used as an assessment activity in order to see how it went. Teacher should focus on the next questions and reflect about:

- Is there any evidence of production? Of what kind? Have they been able to produce the vocabulary items when they see the food in front of them?
- Have they been able to reproduce the structure worked during the session?
- Have the activity been useful to practice the vocabulary done in other sessions to use it in a real context?
- Have they enjoyed the activity?
- Has the timing be realistic?

In the first semester, Natalia received multimodal scaffolding on being realistic about the time needed for activities and the cognitive abilities of the age-group of students she was targeting. She had also received input on the necessity of the teacher creating opportunities for language reception and production by the students. In the second semester's planning, Natalia sought to teach language using the podcast technology as a tool to facilitate opportunities for students to produce communication related to food. Extract 11 indicates that Natalia seeks to evaluate the podcast activity in terms of students' production (for which she seeks evidence) and also aims to assess the overall structure of the activity (does it respond to students' existing knowledge?) and asks herself whether the activity helps generate opportunities for language production, promotes students' motivation and whether her estimation of time was adequate.

In this light, Natalia's final textual production can be taken as evidence of learning in the sense that she synthesizes and uses the knowledge she acquired about legitimate language teaching and learning to self-examine, very realistically and objectively, whether her

teaching practices actually correspond to the cognitive representations and teaching goals that she learned; whether she had reached the goals she had set for herself and then is able to identify aspects that need improvement.

9.2. Anaïs' case

This section relates how Anaïs' became competent in planning instruction for the young learners' classroom through gradual mastery of cognitive tools/strategies for thinking and reasoning about CB/ CLT, facilitated through instruction via multimodal interactions with her virtual peers.

9.2.1. Product-oriented data

Extract 12 is taken from Anaïs' final wiki reflection at the end of the year. This is what she relates regarding her developed ability to plan didactic material.

Extract12

There are some important things I will carry on my “learning bag” such as some tips on planning, interaction, assessment, embedded learning, teaching/learning styles, and so on. What I have basically learnt from this subject is:

1. To know where I want to go beforehand (school bus planning metaphor) but bearing in mind that I need to be flexible and adapt my plan when necessary (almost always :D)
2. To avoid always focusing my classes on the traditional way of interaction (teacher guiding and facing students). It should be goof to try to foster another type of interaction (student-students) and let students take the reins of the class; we should give them a try!
3. To know that assessment criteria should be understandable not only for me, but also for students, families and other teachers. It would be good for students to know the assessment requirements and teachers’ expectations beforehand.
4. To try to show students that they are leaning for a real purpose in a real context (as much real as possible). If so, they will learn in a good direction in the sense that they will probably know how and when they can put into practice what they learnt.
5. To be aware that my learning style has a direct influence on my teaching style so I have to try to avoid doing activities based on the same teaching style.
6. To know that it should be good to identify students’ learning styles if I want to be close to their needs and interests. Bear in mind students with special needs and adapt activities every time if it is possible.

In Extract 12, Anaïs enumerates the “important” aspects of her learning to plan. She calls these aspects “tips” that she will keep for guiding her thinking about planning didactic material in the future. These tips include: (1) envisioning her final output and students’ final displays of competence (point 1); (2) applying multiple configurations of classroom interactions distributed across teacher-students but primarily students-students (point 2); (3) to plan for fair and transparent and comprehensible assessment for the students. She relates her awareness that she is working not only with the students in the classroom but also their parents and other teachers at the school (point 3); to create learning conditions which will help the students perceive their learning as meaningful, imbued with real-world relevance and sustainable value (point 4); to be innovative in her teaching style and thus use multiple approaches to teaching (point 5); to keep students at the centre of her teaching practice; to

recognize the multiple learning styles that the students have and adapt her teaching accordingly (point 6).

She claims she will use these tips as guidelines and objectives for her future as teacher. Furthermore, she relates mastery of the habit of asking reflective questions as a tool to self-regulate her thinking about these objectives. As she states:

Extract 13:

I've learnt that in order to become a good teacher you will always have to ask yourself the reason of your practices and behaviour in class (why do you do this? What is it for?). I feel strongly comfortable with this belief although I think I still have to improve many aspects I should perfectly deal with as a future teacher such as classroom management, how to group students, assessment techniques, etc.

Extract 13 indicates that these cognitive tools consisted in reflective questions to evaluate the legitimacy of her practices. She refers to her competence in dealing with the practicalities of classroom practice e.g., organizing instruction in a meaningful way corresponding to local and larger educational goals.

9.2.2. Process-based data

A retrospective look into Anaïs' interactions traces this development in a series of rotated scaffolding between tutor and virtual peers. In this sequence of multimodal interactional events, which are called here "episodes of cognition", Anaïs gradually appropriated the language for envisioning language learning in terms of learning objectives, distinguishing them from teacher goals, and learnt how to organize group work (not analyzed here) . Overall, Episode 2 traces the interactional process through which Anaïs learned to organize

and articulate her thinking within the framework of communicative competence-based instruction aimed at enabling students to become functionally competent in the language.

EPISODE 2: DEVELOPING STRATEGIC PLANNING SKILLS FOR THE YOUNG

LEARNERS' CLASSROOM

Verbalizing plans prior to scaffolding: Actual developmental level

Before moving onwards and in order to understand the contributions of university and virtual interactions to teacher learning it is important to examine Anaïs' initial planning, which she presented at the very beginning of the practicum. This will account for understanding her actual developmental level at the beginning of the practicum and ground the proximal developmental level that she reached through interaction with multiple others and tools.

Prior to her presentation, Anaïs had previously distributed questionnaires, from which she had identified the topic of sports and healthy lifestyle as interesting and motivating for the students.

Extract 14:

- 1 ANA i did a plan which my final product will be a... a little contribution for the
2 school magazine and in order to do this... i thought that students could do
3 an interview to a professional sports man or a woman that could be a... i have
4 a friend who is a shot putter professional... he lives in barça and i thought he
5 come to school and other sub-products could be a quiz preparing a quiz for
6 the readers about sports and healthy lifestyle and... so the first sessions
7 will...be about sports and hobbies but for introducing... vocabulary [counting
8 one with her fingers] and... and question structures [counting two with her
9 fingers] and at the end... so at the end students will be a able to do...
10 [hesitates] all these [laughs] the final product and these sub-products
11 and that's my idea but.. but I'm still thinking of... how to assess this [...]
- 12 I don't know how to assess it

In extract 14, Anaïs describes an array of ideas for language teaching and learning. She proposes different types of final outputs with real-world relevance including an interview, a quiz, and an article about sports and healthy lifestyle as a contribution for the school magazine. Seemingly aware of the premises of the paradigm she is working in Anaïs draws from past theoretical instruction to define final output, which needs to resonate with a communication-oriented learning scenario. Anaïs' choice of outputs implies that she aspires to give fifth-grade students the opportunity to actively produce language; thus create a student-centred communicative environment for language learning.

Within the CB/CL orientation, the mode of classroom interaction that Anaïs proposes involves interaction between teacher-students and eventually students-guest to the end of doing an interview and a quiz (lines 3-5). She describes her own responsibilities i.e., bring a guest to the classroom and pre-teach relevant language in order to generate the basis for the students to carry out the interview. In lines 6-7, she identifies the linguistic aspects involved in this unit i.e., sports' vocabulary and question structures. At this point of her planning, she seems to focus on her own role in the classroom, featuring as the transmitter/model of language beforehand, which, as she states, the students would later materialize into concrete output (lines 9-11). At this moment, she does not concretize desired students' productions of language, which she can evaluate. She herself notes this shortage and remarks that she does not know how or what to assess (lines 11-12).

The classroom discussion dealt with narrowing down final outcomes while taking into account time and context (e.g., learners' age and cognitive abilities), and evaluating affordances of each task to language learning. Anaïs' online meetings with her partners

became a decisive moment for her to start moving beyond this abstract and largely intuitive plan to a more scientific design that includes dialogic instruction.

EVENT 11: VIRTUAL (ASYNCHRONOUS) INTERACTION (NOVEMBER 2009)

Virtual scaffolding: Learning to verbalize desired language output

Towards the end of November, Anaïs posted her first draft on Zoho regarding the purposes of her teaching sequence, after her initial presentation in the tutorial. By this point in time, Anaïs had decided on a poster as a second final product of her unit as complementary to the interview with a professional sportsman (and not the article she initially wanted to assign to the classroom). She shares this planning with her American partners on Zoho.

The final purpose of the teaching sequence is to develop students' oral and writing skills. Students are normally more focused on grammar so I would like to focus, specifically, on students' oral skills since **the final purpose to learn a language is to know how to use it**. To be able to do this, students will talk about sports and hobbies; they will do an interview to a professional shot-putter; they will make a poster (pair work), and so on.

This goal seems to be too general at first and too agenda-like second. Maybe you should narrow it down some? What particular structures (grammatical, discourse, writing, or others) do you want to teach. We've learned to phrase our goals in SWBATs (Students Will Be Able To...). This has already helped me in my classes. Maybe this structure will help you narrow your purpose.

Extract 15a: First teaching unit draft (which she posts in Zoho on November 20, 2009) and peers' feedback

Specifically, in this extract, Anaïs frames her plans and thinking in the general paradigm of communicative language teaching, the paradigm she has been observing at school and has been taught at the university. She explains that she wants to promote oral and written communication instead of the grammar-focused paradigm which, according to her, students

are more accustomed. She affirms her belief that the essence of language lies in its communicative nature and the essence of learning a language is to learn to communicate effectively (“the final purpose to learn a language is to know how to use it”). Her goals as a teacher are “to promote oral and writing skills” by creating a context of opportunities for the students to “talk about sports and hobbies” and present their favourite sports in a poster. Imy, one of her two virtual peers, reviews her planning and observes that Anaïs’ goals resemble an agenda of activities to be, rather mechanistically, implemented in practice. Imy remarks that her goals are too general and tutors Anaïs about formulating specific objectives (and in turn defining measurable learning outcomes). Imy, posing as the more capable peer with more experience in planning teaching sequences, suggests that Anaïs uses the SWBAT construct to think about and clearly articulate concrete language that she wants to teach and “narrow her purpose”. As Imy explains, SWBAT (Students Will Be Able To) is a construct that she has learned in her classroom in the US and has helped her in her planning. She then explains how Anaïs could use it for organizing teacher thinking and planning around “particular structures”.

This is the first instance of peer virtual scaffolding, which results in the sharing of a specialized language that teachers use in their lesson planning practices. Shortly after this comment, on December 3 2009, Anaïs met with her peers, Imy and Cho online and the discussion on this issue continued. In this synchronous virtual meeting, Anaïs initiated the discussion by asking about assessment, which as she says, was the teaching aspect she was still having trouble with.

EVENT 12: VIRTUAL INTERACTION (DECEMBER 2009)

Re-scaffolding: Learning to articulate desired output

Extract 15b:

1 An@! dice: and what will you assess while they're doing their
2 presentation? [...]
3 Imy dice: Anaïs, I really like your SWBAT as a list of activities, but the
4 idea behind SWBAT is more to talk about what students will
5 be able to do linguistically
6 and this is how you can assess them
7 cho73 dice: you can make assessing standard for exmaple, content, how
8 clear...
9 An@ dice: that's another interesting point I've borrowed from you
10 (SWABTS)
11 Imy dice: you're welcome [...]
12 But SWBAT is more like, "students will be able to use key
13 english phrases in presenting a poster about their favourite
14 sport."
15 the language use is the key part of SWBAT
16 An@ dice: Thanks for the clarification!
17 is good to have USA peers

This online discussion triggered by Anaïs' question about assessment, without specifying potential linguistic output to be assessed (lines 1-2). Imy retakes her previous asynchronous comment to Anaïs regarding linguistic objectives and re-indicates the absence of specific language objectives that Anaïs aimed to teach. She suggests and encourages her to use the SWBAT concept to define language learning outcomes and assess the students based on whether they had reached these outcomes (lines 3-6). Cho adds to this point suggesting that Anaïs uses her goals for "mak[ing] assessing standard" (line 7). Anaïs' acknowledges "borrowing" this construct from her peers (during their asynchronous conversation) but does not seem to have incorporated it in her unit.

Imy then redirects this discussion to the essence of effective pedagogical practice by pointing out that effective teaching does not lie on the amount or the form of activities but

on the teacher's ability to state clear language-related objectives, which they will later use as the basis for assessment. She exemplifies the SWABT construct as a mediational cultural artefact for envisioning, formulating and assessing specific students' behaviour in order to gauge language learning outcomes from the students' point of view. She models the appropriate way that this construct is used by teachers in the context of Anaïs' unit (lines 12-14). This prompt provides strategic feedback for Anaïs to understand how to go about the process of thinking and formulating specific objectives for her students.

Of pedagogical relevance, this extract attests to the creation of an online "collaborative frame" (J.P. Lantolf & Aljaafreh, 1995) facilitated by the presence of more knowledgeable peers, in this case Imy who provides scaffolding and thus becomes a reliable dialogic partner for Anaïs outside the classroom. This collaborative frame is constructed in relation to respective perceptions of each others' ZPD and prompted by the presence of 'more knowledgeable others' in terms of teaching experience (theoretical and practical experience).

The issue of learning to formulate language objectives was a prevalent issue of concern and was repeatedly discussed in the classroom through tutor-paced interaction (see for example Episode 1 above). The tutor's discourse provided a first scaffold into planning. It dealt with narrowing down of abstract and large ideas into realistic classroom practice and aimed to encourage future reflection on the content-context relationship in the longer-term; that is, teach student-teachers how to pace and structure abstract ideas into coherent activities and promote critical and autonomous decision-making. Similar to Natalia's case, Anaïs' virtual meeting provided additional and valuable feedback on specific "weak" aspects of the unit, not treated in class time. It is important to note how the small-group virtual configuration

between peers, imbued with different power relations, provided simple comprehensible feedback targeted at specific student-teachers' needs (Thurston, et al., 2009) and enabled them to move beyond their actual developmental stage. In Anaïs' case, the virtual feedback multiply scaffolded the most challenging point in her planning. This multiple scaffolding on thinking about and formulating linguistic objectives, including explicit modelling, helped Anaïs to understand what she was doing wrong and what she was expected to do and thus advance her planning skills. Note how Anaïs, on two occasions in this extract, recognizes her own process of learning and making sense of the world as a dialogic construction through the words of others i.e., virtual peers (lines 9-10; lines 16-17).

Anaïs herself acknowledged the central role of the virtual mediation in this development at several times in her final wiki reflection. For instance, she writes:

Extract 16:

I believe that by doing the tutorials I've improved a lot since I've learnt from my own weak points, such as phrasing the objectives of my teaching unit which was a hard task. [...] The MSN conversation I had with my UIUC peers was a powerful resource to bear in mind.

Specifically, Anaïs acknowledged phrasing teachers' objectives and assessment as her "weak point". She acknowledged that Imy and Cho's, contributions as a "powerful resource" that helped her "learn a lot from [her] own weak points" citing the extract of assessment following clearly-articulated objectives (see extract 15b above).

Overall, this data indicates that the network-mediated interaction afforded a hands-on learning experience that helped concretize teaching practice, carried out through dialogic one on one feedback in context. This is a representative example in which the practice i.e., network-based interaction centred on the issue of concretizing linguistic objectives

becomes the medium to understand educational theory (taught in the Teaching Methods class).

The virtual interventions of the student-teachers helped them develop new understanding, for instance, it provided essential clarification about conceptualizing and clearly articulating concrete student-centred learning objectives. In turn, the interactions created conditions for the tutor to mediate new knowledge construction by introducing a further distinction between learning goals and objectives that includes reflecting on the perspectives of the two agents involved in the classroom, teacher and students respectively.

EVENT 13: CLASSROOM INTERACTION (DECEMBER 2009)

Distinguishing between objectives and teacher goals

Extract 17:

- 1 ANA: and then... in order to practice all the structures apart from saying I
2 like or I don't like I've thought to ask three friends and complete the
3 chart that I will prepare... asking do you like [meaning blank] and
4 then they would have to talk about something that a friend told for
5 example mireia likes swimming... joan doesn't like...and that's all
6 and then... i have included this [pointing at the powerpoint] and i've
7 tried to... plan my objectives based on the swats*
- 8 UT: Swbat
- 9 ANA: swbat methodology which also imy from chicago told me and i've tried
10 to narrow down the purpose of my teaching sequence ...but it's difficult
11 i mean this morning i did the objectives again and i and i and maybe
12 they're too general objectives still like here i don't know you can...
- 13 UT: or maybe you could divide it for yourself between your aims as a
14 teacher where do you want them to get at the end and... and that...
15 maybe divide it aims for you and objectives...
- 16 ANA: and for them
- 17 UT: for them and even output mostly because sometimes we mix up output
18 and objectives
- 19 ANA: this is what i expect that... this is [showing the powerpoint] what i
20 expect that students will be able to do at the end i don't know if it's clear
21 but [...]
- 22 UT well this will be nice for you...
- 23 ANA yeah?
- 24 UT at the end to assess your own unit teaching sequence
- 25 ANA uh-ha
- 26 UT it's a good way this is what you've said I want students...students will

In extract 17, Anaïs describes possible ways of guiding students into reaching the linguistic objectives of her unit. She suggests using a chart (worksheet), on which the students would document language productions, following group interactions about likes and dislikes (lines 1-6). In lines 9-10, she indexes the contribution of her peer in providing her with the “methodology”, as she calls it, to narrow down her objectives and formulate desired language productions. At the same time she admits that she still has trouble with setting clear-cut objectives (lines 11-12). The tutor then suggests the distinction between learning objectives and output, as further scaffold for Anaïs to clarify her thinking on planning language objectives (line 15-18). The tutor also introduces the process of assessment as directly related to the formulation of student-centred linguistic objectives (lines 22; 24). The tutor again makes the connection between the pre-defined linguistic objectives and teacher evaluation of the activity as success in reaching those objectives (lines 26-27).

The following textual productions reflect and document the intertextuality of voices analyzed in the above. On the one hand, Anaïs is merging the competence and behavioural verbs under the umbrella and conceptual framework of the SWABT that Imy suggested to enact the competency-oriented paradigm in foreign language education through application of language.

EVENT 14: SCHOOL IMPLEMENTATION (JANUARY-FEBRUARY 2010)

Authorship in textual productions

Extract 18

4. Purpose of the unit
The SWBAT methodology for planning and phrasing the objectives of my teaching sequence unit will be the following one:

Objectives (Students will be able to)

- Recognize (oral and written) and produce some of the basic **vocabulary***
- Sing a song while dancing
- Ask each other "Do you like (swimming)?"
- Read English interview
- Brainstorm questions for an interview (catalan allowed)
- Translate these questions into English
- Do an interview
- Do a poster about any sport (main information)
- Do a poster's presentation

***VOCABULARY**

Basic Linguistic content

- Playing handball, gymnastics, aerobics, kite surfing, bowling, snowboarding, doing judo, playing volleyball, playing football, playing basketball, playing tennis and shot-putting.

Content Review

- Listening to music, riding a bike, canoeing, swimming, watching TV, rollerblading, playing football, playing basketball and playing tennis.

Receptive linguistic content:

- Sports, hobbies and fitness facts.

In her final teaching plan she uses the SWBAT, which she calls methodology, to assign expected actions and behaviours from the students ranging from recognizing (read English interview) to reproducing (singing) to producing language (brainstorming questions for interview; doing a poster presentation, doing an interview) and competencies of selecting relevant information (do a poster about any sport); relating mother tongue and foreign tongue (translate these questions into English).

The following extract is taken from Anaïs' conversation with her group of peers (different from the ones she worked with in the first semester). This conversation took place in March, 2010. On this occasion, Anaïs and her peers were required to re-engage with the

task of setting language objectives for a new shorter instruction (podcast). The conversation reveals how Anaïs took on tutoring her peers, who did not seem to be clear about the SWABT “methodology”.

EVENT 15: VIRTUAL INTERACTION (MARCH 2010)

E-tutoring: Using learned language and concepts to design second round of teaching material

Extract 19:

- | | | |
|----|----------------|---|
| 1 | Anaïs: | goals refers to what the T expects? and objectives is related to |
| 2 | | the SWBAT's? |
| 3 | Janire Okelli: | I mean the teacher goals |
| 4 | Jaska Peretz: | Anaïs I had hard time understanding that question |
| 5 | | Do you know what he means by SWBAT's [...] |
| 6 | | I think by objectives , he means our objectives in the podcast and |
| 7 | | teacher goals means what we expect that our students |
| 8 | | accomplish with the podcast [...] |
| 9 | Anaïs: | Ok I think is the other way round |
| 10 | Jaska Peretz: | Yes! Well for me both are to tie. |
| 11 | Anaïs: | and goals are our podcast objectives |
| 12 | Jaska Peretz: | So, we can just put them as one |
| 13 | | if you are agree |
| 14 | Anaïs: | really?[...]But obj and teacher goals are not the same. we need |
| 15 | | to define our expectations both for the podcast and students |
| 16 | Jaska Peretz: | Well I mean, if he said that it should be separate we can |
| 17 | | separate[...] |
| 18 | Anaïs: | Well teacher goals could be two or three like: 1) Introduce new |
| 19 | | vocabulary (oral and written) about hobbies [...] |
| 20 | | 2) expose children to real communicative events adn 3) expose children to |
| 21 | | different native English accents |
| 22 | Anaïs: | what do you think? are these goals (podcast goals) okey for you? |
| 23 | | we can change or add whatever you propose... |
| 24 | Jaska Peretz: | They are okey. |
| 25 | | We can use them as a teacher goals |
| 26 | Janire Okelli: | yes, its okey, once we are doing the podcats we are allowed to |
| 27 | | change them if it is necessary |
| 28 | Anaïs: | then the objectives (what we expect children to do by watching |
| 29 | | and listening to the podcast) could be the following |
| 30 | Jaska Peretz: | About the second one, is going to depend of how we design the |
| 31 | | pod cast |
| 32 | Anaïs: | SWBAT: 1)comprehension; 2) reproduction (imitation) and |
| 33 | | finally 3) production |
| 34 | Jaska Peretz: | Thank you Anaïs |

Anaïs' peer, Jaska, states that he is having trouble grasping the two different perspectives involved in this task as well as describing and clearly formulating objectives and goals for the unit (lines 4-8). This incidence creates a demand for Anaïs to re-operationalize her existing knowledge about setting objectives. At this stage of her learning process, she defends her knowledge against ambiguities and different opinions about what constitutes learning objectives, and she herself applies the mediational means i.e., teacher repertoire that she was taught in the classroom to self-regulate her thinking, support the validity of her claims and thus effectively carry out the task (lines 14-15). All the above characteristics of this interaction contribute to an understanding of an advanced cognitive process, during which Anaïs synthesizes all previous knowledge and clearly distinguishes learning objectives from teacher goals and eventually overcomes her previous weaknesses on this aspect of the task. On yet another occasion, she constructs her unit around behavioural terms (Bloom, Hastings, & Madaus, 1971) to measure students' outcomes (lines 32-33). Her contribution is recognized and valued by her UIUC peer (line 34).

EVENT 16: SCHOOL IMPLEMENTATION (APRIL 2010)

Authorship of learned concepts in textual productions

Anaïs' textual productions following the design of the podcast-based unit read as follows:

Extract 20

Objectives - SWBAT

1. Comprehend some oral and written vocabulary about hobbies
2. Reproduce the sentences students will be given in different card identities
3. Have a short conversation (6 groups of 4 students each) and produce sentences such as the following:
 - What were your hobbies (some years ago)?
 - I used to...
 - But what are your hobbies now?

- | | |
|----|---|
| • | Now I (like).... |
| • | And what about you (Julia)? |
| d) | Write about partners' hobbies and other teachers' hobbies (by completing a chart) |
| e) | Do a short oral presentation |

For the second time around, Anaïs applies the language she learned to strategically plan a CL/CB teaching scenario. She uses the language she had learned i.e., comprehend, reproduce, have a conversation, write and present to envision the students' expected linguistic behaviour.

Summarizing, Episode 2 traced the mechanisms through which Anaïs gradually became able to self-regulate her thinking around diverse personal aspirations and in turn develop the skill to pace and organize her teaching practices around concrete language objectives. It related how her virtual meetings complemented and expanded university instruction. Anaïs' virtual peers explicitly taught her the language of how to envision language learning in terms of pre-defined recognizable and measurable language productions to be reflected in the students' final output (e.g. SWBAT). The extracts displayed in Episode 2 empirically demonstrate that the telecollaborative activity facilitated a meeting of two different cultures of learning that stretched the boundaries of Anaïs' - and the others participants' cognitive and practical abilities by expanding the existing mediational means available for thinking about, conceptualizing and formulating objectives (SWBAT, extracts 15a and 15b above).

9.3. Caterina's case

For Caterina, using the language effectively, both on a personal and school level, as the medium and object of instruction was a central issue. Caterina reported in her wiki that she felt uncomfortable when delivering instruction in English and resorted to Catalan and Spanish when giving instructions. Indeed, audiovisual data confirm that she was a largely silent, yet receptive participant in classroom discussions. The data collection often shows her silently taking very thorough notes. Throughout her virtual meetings she sought native input in finalizing formal assignments, prior to submitting them for assessment i.e. teaching drafts and podcast planning.

9.3.1. Product-based data

This section presents Caterina's final outcomes in terms of learning to strategically plan instruction for primary students using the conceptual basis of the CL/CB paradigm and in relation to the context she was teaching. Extracts 21 and 22 are taken from Caterina's wiki reflection at the end of the year, in which she, herself, evaluates her competence against the EPOSTL criteria.

Extract 21:

Another competence is "A good teacher knows how to plan and conduct lessons". I learned a lot about planning and conducting lessons and I am sure I know how to establish goals, how to sequence the activities, how to sustain learners' motivation and interest, how to start a lesson in an engaging way, how to finish off a lesson in a focused way, how to encourage learner's participation... but the most difficult and trickiest task for me is the timing. I am convinced that experience will help me on that but it is tricky nowadays.

Extract 22:

“Creating opportunities for and manage individual, partner, group and whole class work” (2007, EPOSTL) is key to teach language. I feel like I achieved that competence and I feel proud of my evolution. When I imagine myself carrying that competence out I feel I will be able to create opportunities but I also feel I should not get over-confident since activities need to be carefully planned if I want to manage them. I need to plan how to monitor students, how to guide their learning process, how to assess them... in a way students both learn and enjoy and I take profit of the teaching-learning process.

In Extract 22, Caterina documents development in the ability to integrate multiple dialogic configurations (students working in groups) in her teaching practices; and at the same time articulates future goals for herself as an effective guide and monitor of profitable learning processes. In doing so, she indexes components of her own learning process as dialogic, distributed across individual, partner, group and whole class work.

9.3.2. Process-based data

This section relates how Caterina, through her multimodal interactions gradually mastered cognitive tools for envisioning, conceptualizing and designing contextualized CL/CB instruction (initial approach to designing didactic material). Specifically, this section relates how the tutor, her class and virtual peers operationalized conceptual tools in the context of Caterina’s unit through reflective questions and suggestions and contributed to her understanding of the overall conceptual framework of CL/CB instruction. At the end of this process, Caterina was able to self-regulate the conceptual tools of CL/CB paradigm and strategically plan didactic material.

EPISODE 3: DEVELOPING STRATEGIC PLANNING SKILLS FOR THE YOUNG

LEARNERS' CLASSROOM

Caterina was the last one to present her teaching plans to the class (following Natalia and Anaïs). She had decided that she wanted to work on the parts of the face and wanted students to be able to produce this vocabulary. By the time of her virtual meeting she had incorporated the comments that were given to Natalia and Anaïs, who had presented before her; that is, how to formulate objectives and a better understanding of what teachers need to take into account when designing teaching sequences, (see sections 1 and 2 above).

At this point, Caterina's virtual partner suggested strategies for promoting communicative events, and in turn fostering language use and production in the classroom.

EVENT 17: VIRTUAL INTERACTION (DECEMBER 2009)

Virtual scaffolding on constructing communicative instruction

Extract 23:

- 1 Jean: i like your new first lesson
2 Caterina: [...] I had to change all the unit because I planned the unit and
3 then the teacher said me I had to include the text book too, so it was a
4 mess and it didn't match
5 Jean: yeah but it make more sense
6 it flows together well
7 Caterina: Yes
8 Jean: i like the little monster!!
9 Hahaha [...]
10 Jean: it would be really cute if you could add a mirror or
11 something for the back of the book and have the students look at their
12 own faces and the parts on their face
13 Yes [...]
14 Caterina: I like what you say about the mirror. Because I'm doing it with
15 Voicethread I could add a picture of the class at the end, so.. Little
16 monter, what do you see? I see 18 children looking at me! Hehehe

In extract 23, Jean congratulates the changes that Caterina made to her first lesson plan (which she had seen and commented via asynchronous communication) and suggests that she use a mirror as a resource to promote communicative and kinaesthetic teaching and learning, allowing students to enact what they say (lines 10-12). Caterina likes this idea and invents a possible communicative event for the classroom using the idea of the mirror. Interestingly, this becomes an instance where both peers engage in creativity and continually adapt each other's ideas to generate possibilities for language learning instruction in a communicative way (lines 14-16).

Events such as 16 above were part of a flow of information which was in turn exchanged and evaluated by the virtual partners. This flow of information consisted of techniques and ways of doing communicative language teaching in the school classroom. In this sense, this aspect of virtually-extended interaction enhanced the understanding of the methodological framework of communicative competence-based pedagogy by which the student-teachers were being trained by requiring the participants to explicitly express how they thought these approaches should be operationalized. At the same time, such instances where the virtual peers provided further resources for the classroom, drawing from their own experience and teaching context, generated a sense of security for Caterina, Anaïs and Natalia, who were just beginning to teach and were struggling with pedagogically valid ways to reach the complex educational requirements for the FL classroom. This latter conclusion can also be corroborated by the student-teachers' post reflections of the experience (for instance, see Chapter 10 for examples in which student-teachers discuss the affective component of learning how to think and learn dialogically).

The following event is also related to learning to strategically plan instruction. It involves

feedback on the language as content and its adequacy for the targeted audience. Extract 24 is taken from the same virtual meeting between Caterina and Jean. The following extract relates events in which situated relevancies of the telecollaborative setting, in this case the linguistic identities of the virtual peers (native and non-native) become relevant to advancing professional competence.

EVENT 18: VIRTUAL INTERACTION (DECEMBER 2009)

Peer scaffolding prompting reflection on language to be taught

On this occasion, Jean makes grammatical corrections to the language structure that Caterina wanted to teach. Following this feedback, Caterina to reflect on the level of difficulty that such structure involved for young learners of EFL.

Extract 24:

- | | | |
|----|-----------|---|
| 1 | Caterina: | about the rest what do you think? do you find something I would |
| 2 | | change? |
| 3 | Jean: | i just have a small thing "red eyes monster"... i think should be red |
| 4 | | eyed monster |
| 5 | Caterina: | ooooh! that's true.. but it's too difficult...don't you think so? |
| 6 | Jean: | Hmmm |
| 7 | Caterina: | i could ask them to use Big, small, long, short because the book |
| 8 | | introduces this vocabulary |
| 9 | Jean: | yeah the eye must be past tense tho so there should be a d there |
| 10 | | i think.... |
| 11 | | so big eyed monster |
| 12 | Caterina: | yes... that's a problem |
| 13 | Jean: | it's just a little problem |
| 14 | | nothing big |

At this moment of the interaction, the US peer corrects the structure that Caterina intended to teach (lines 3-4; 9-10). Caterina reflects on the level of difficulty that this language structure might pose to her working context, which is primary education (lines 5; 12),

despite her partner's attempts to reassure her that it is "a little problem nothing big" (lines 13-14). Arguably, such instances also contributed to a sense of security. In Caterina's case, it saved her from a face-threatening situation in the classroom and prompted her to reflect about the relationship between content (language) and context (age group of students, existing knowledge and cognitive capacity).

EVENT 19: SCHOOL IMPLEMENTATION (JANUARY- FEBRUARY 2010)

Authorship in textual production

Caterina used her virtual peer's on the language to modify the structure she was going to teach.

Extract 25

Activities

5 min.: Daily routines (how are you? what's the weather like today? What day is it today?) I will do that in order not to break with the routine of the teacher who always does this at the beginning of the class. Explain **the behaviour car** we are going to use (see Tool Box).

10 min.: Reading the book. We will sit in the reading corner and I will read the book. I will read it first without interaction, just to present the story and the structure that is all the time repeated. Then I will ask students if they want to listen the story again and I will tell it again with interaction, trying to see if students predict or remember what comes next. I will stop and wait for them to fill in the word or the correct sentence. I will try that they fill in the structure, not the vocabulary.

10 min .: Presenting them the final product: new version of the book. The new version will be about the face because it's the vocabulary that I have to work on related to the textbook.

The new version will say: "Mr. Zipadee, Mr. Zipadee, what do you see? I see a big nose looking at me!" So they will draw and colour a big nose. The version will be about Zipadee because he's the puppet they use in Primary. All the units are planned around a story about Zipadee and so it will be.

5 min.: To help students understand how the book is going to be I will pick Zipadee and flashcards up. Students ask: "Mr. Zipadee, Mr. Zipadee, what do you see? And teacher says: I see (different flashcards) looking at me"

In her formal teaching planning, she modifies the structure from the adjectival compound "red-eyed monster" to "big nose looking at me", which would be more appropriate for the age and proficiency level of her students and uses flashcards to support/scaffold students' production (paragraphs 4-5). Other ethnographic data reveal Caterina's conscious attempts to adopt English as the main language of instruction and look for strategies in which she could ensure students' comprehension. She was worried that the students wouldn't understand her when she was speaking English (school journal) and asked the school teacher for ways she could overcome this challenge. She reported using simpler forms of language when speaking and facilitating understanding of new language by reformulating new language, , with familiar language for the students.

In her oral presentation (extract 30), she relates how she learned language for formulating objectives.

Extract 26:

CAT then about planning i think i learned a lot of... words like uh production reproduction recognizing understanding and it helped me a lot to write my objectives and... and in planning I think I improved a little bit in timing but it's hard for me to think how many* how much time they are going to... to be doing the activity

As she explains, this language consisted in behavioural terms echoing Bloom's taxonomy as we have seen in Chapters 9-10, which she used as cognitive tools to regulate her thinking and envisioning the language learning from the perspective of the students.

In her wiki, Caterina acknowledged the fact that she had a lot of different people correcting her work on both content and form.

Extract 27

I think feedback about the content (activities) of the unit are important, but feedback about the written form (how to write objectives, contents...) are very important too.

Something very important I have learnt during the Practicum sessions is to use feedback from others. For me it's difficult to notice mistakes in something I have done, because I do it that way because I think it's correct, so it's difficult. [...] with this Practicum I have had the chance to do better teaching units because, since now, anybody has corrected me the units I've done. The teachers have just given me marks but nobody gave me feedback so I didn't know what I was doing wrong or not. In the 3rd year of the degree is the first time I receive feedback about the unit and I have had the chance to observe and modify what I do wrong. It's very useful for the following units I'll do.

Extract 27 corroborates that feedback involving direct corrections on the language responded to Caterina's needs in the process of learning how to strategically plan instruction thus boosted her performance and facilitated her performing more complex tasks in the classroom. Specifically, this finding indicates that language as object and medium of instruction posed barriers to her classroom performance (data shows that this more prevalent in Caterina's case compared to Anaïs and Natalia). In this sense, it can be argued that the virtual component became a setting in which she was able to discuss and receive solutions to this barrier. In turn, it contributed to her taking the next step in using English in the classroom as the medium of instruction.

Caterina also seems to distinguish between feedback as correction of mistakes or marks (that she received during previous years of instruction and feedback as questioning, suggestions, and advise that enabled her to "observe and modify what she was doing wrong", with, as she states here and elsewhere (see extract 58 further below), became the basis for quality changes, which she remarks as useful for her future lesson planning.

Authorship in textual productions

Following this process, Caterina designed her teaching sequence around eight objectives as follows.

Extract 28

Objectives

- To promote global understanding when a story is read aloud
- To promote participation in storytelling sessions by repeating key vocabulary and phrase
- To produce and use classroom vocabulary
- To learn, understand and use “have got” structure
- To write a sentence using a model offered by the teacher in order to create a page of the new version
- To produce the new story to be recorded
- To describe orally and written the face of somebody
- To recognize the word orally/written

EVENT 20: VIRTUAL INTERACTION (MARCH 2010)

I'll write and you can check the English

In the second semester, Caterina and her virtual partner engaged in a second design of teaching material for the classroom. In the following interactions Caterina and Jenny are speaking through their avatar identities. Caterina's avatar is Cate Pixelmaid and Jenny's is Joy Luponox.

Extract 29:

- | | | |
|---|-----------------|--|
| 1 | Cate Pixelmaid: | ok, if you want we can talk.. then I will write it |
| 2 | | down..and you can check the english then.[...] |
| 3 | Joy Luponox: | sure. |

First, Caterina explicitly asks her peer to revise the final draft of the podcast sequence for language (lines 1-3). This event showcases an example of explicit request for e-feedback from a native to a non-native student-teacher to the end of improving written assignments. Second, the two peers work together to frame the principles of their teaching. Third, the virtual partners co-formulate objectives from the perspective of the students.

EVENT 21: VIRTUAL INTERACTION (MARCH 2010)

Peer-tutoring: Externalizing learned concepts on grammar as emergent through communicative activity

In the second semester, Caterina's online conversation with her peer presented another opportunity for reflection and critical argumentation to defend her cognitive understandings of FLE as communication-based. Her peer, Jenny, was not an expert in primary education, she was mainly teaching older students, and she was not required to implement the podcast; thus she follows Caterina's lead in terms of pedagogical decisions.

In the following extract, Caterina clearly positions against explicit grammar instruction and defends her belief in applying the Communicative Approach in her teaching.

Extract 30a:

- | | | |
|----|-----------------|---|
| 21 | Cate Pixelmaid: | so it would be good to focus on grammar as you said |
| 22 | Jenny Luponox: | yeah, if we are dealing with too many things, it |
| 23 | | will be overwhelming. |
| 24 | Cate Pixelmaid: | Yeah |
| 25 | Jenny Luponox: | I'd like you to develop two or three ppt slides |
| 26 | | focusing on grammar he present continuous like.. |
| 27 | Cate Pixelmaid: | but for kids? |
| 28 | Jenny Luponox: | yeah just brief explanation about the tense. |
| 29 | Cate Pixelmaid: | but I don't think teaching grammar in an explicit way is good.. |
| | | [...] |
| 30 | | they have difficulties with spanish and catalan, so i don't think |

31 teaching the tense...
 32 Jenny Luponox: then, I will follow your excercises to introduce
 33 grammar :) do you have any preference?
 34 Cate Pixelmaid: if a pre-activity we plan a brain storming of
 35 verbs.. and we introduce the ones on the podcast..
 36 then we can continue as a post-activity with
 37 mimics, where they have to produce sentences after the
 38 teacher modelling it
 39 Jenny Luponox: OK.

Specifically, Caterina reflects on her rationale underlying the choice of a communication-based approach to teaching grammar over teacher-fronted explicit instruction, which Jenny seems to favor (lines 25-26). Caterina argues against explicit grammar instruction, which she rejects based on classroom reality i.e., students' proficiency level with Catalan, Spanish and English and linguistic and cultural diversity, which was also a characteristic of her classroom, lines 29-31 (Moore, 2011).

She positions in favor of authentic communication-based conditions for language learning and the concept of 'students critically do and I help/guide them in the process' which she had been pursuing up to this moment. She proposes brainstorming as an initial activity in order to get in touch with students' existing knowledge of verbs, the podcast technology as a scaffolding tool for the introduction of knowledge and the teacher's intervention in modelling new knowledge, for instance, introducing new verbs to describe the actions of the two elephants introduced in the podcast (lines 34-38).

EVENT 22: VIRTUAL INTERACTION (MARCH 2010)

Externalizing concepts: Independent-like formulation of objectives

Extract 30b:

40 Jenny Luponox: SWBAT-Ss will be able to do...?hmm..

41 Cate Pixelmaid: To produce sentences using present continuous ?? [...]
42 Jenny Luponox: that's an objective in terms of grammar.
43 Cate Pixelmaid: I think students will be able to describe other's actions..
44 (they are playing..)
45 Jenny Luponox: do you wanna focus on other skill like vocabulary or
46 speaking or listening?
47 Cate Pixelmaid: yess Vocabulary: we could focus on colours (revision),
48 adjectives as big, small, tall, thin, fat..
49 Jenny Luponox: great.
50 Cate Pixelmaid: and listening we could asked them to listen the names of
51 elephants..
52 Jenny Luponox: To produce sentences using present continuous
53 To use adjectives related to colour and size
54 so we have two objectives so far.
55 Cate Pixelmaid: Okay

Extract 30b indicates that the dialogue develops into collaborative identification of the teacher goals and learning objectives and in turn the formulation of clear-cut language objectives from the students' perspective (lines 41-48). Both peers deploy teacher language to classify measurable outcomes with the UIUC peer assuming the responsibility of formulating the objectives in formal professional language responding to the SWBAT structure (lines 52-53). Extract 31 below depicts Caterina's final textual production in line with the pedagogical basis she defended in her virtual interaction.

EVENT 23: SCHOOL IMPLEMENTATION (APRIL 2010)

Authorship in textual productions

Extract 31:

Objectives (SWBAT)

- To understand the main idea of the podcast (elephants playing together, having fun...).
- To produce sentences using Present Continuous to talk about actions.
- To understand and produce the names of the colours and some verbs.

- To put in practice their listening/speaking skills to look for specific information in the podcast and answer some questions.

Transversal competences

5. Linguistic and audiovisual communicative competence.
6. Artistic and cultural competence.

Extract 31 illustrates part of Caterina's final textual production in which she states the objectives of her unit (direct reflection of her virtual interaction). Apart from specific competence-based goals in terms of language, Caterina also talks about transversal competences (linguistic and audiovisual communicative competence; artistic and cultural competence); these latter competences are facilitated by the integration of the podcast technology that Caterina and Jean planned (see Episode 9 in Chapter 11).

Extract 32

8 min.: Before watching the video: Teacher explains students they are going to see a video about two elephants. Teacher asks students some questions (wrote on a slide) and students try to find out the answers while they watch the video. Questions: What are Elephants' names? What are they doing? What colour are the elephants? Watch the video (5 minutes long)

3 min.: After the video: Teacher should ask for volunteers to answer the questions (*first slide annex 1*) and congratulate them if they manage to find out the answers.

10 min.: Teacher should explain students they are going to watch the video again but that they should pay attention to the actions now. Say to students:

"What are Sky and Pinky doing? Are they sleeping? Are they dancing? Are they playing?

Are they shaking a tree? Are they kicking the ball? Are they eating?

Are they speaking? Let's see!" Teacher should write the verbs which didn't appear during the brainstorming on the whiteboard. While students watch the video once again teacher should stop the video in different scenes and ask:

"What are they doing? or What is she/he doing?", wait for an answer and then rephrase what students have said in present continuous. Students can repeat the recast and do the mimic of the activity. Teacher can help students saying:

"Sky/Pinky is..." and wait for a completion in present continuous. Students will be able to do it since the video also mentions the actions in present continuous.

Sequencing her teaching, she first introduces the content of the podcast and creates a context for the present continuous structure to be used through questions, following the technique of brainstorming (paragraph 1). Then she plays the video and re-initiates a context for the structure to be used by the students, with the scaffolding of the teacher (paragraph 2). On a third occasion, Caterina plays the podcast for the second and third time. This time, she re-scaffolds the students' production of the language to be learned. She directs them to pay close attention to the actions depicted in the video with targeted questions (paragraph 3). She uses the podcast as a resource to scaffold the process of

learning the present continuous connecting visualizations of continuous actions in the present, which require the use of the tense. In doing so, Caterina operationalizes her understanding of grammar learning as emerging through real communicative contents by designing technology as a potentially mediating tool for FL learning.

Summary

Episodes 1-3 related classroom and virtual events that contributed to improving Natalia, Anaïs and Caterina's planning productions. Specifically, it exemplified how face to face and virtual interactions contributed to their understanding of the factors that need to be taken into account when designing teaching sequences; each in different, yet interrelated ways. The multimodal interactions (classroom and e-feedback) afforded occasions for all three Natalia, Anaïs and Caterina to learn and master teacher technical language, to distinguish between general teacher/instruction goals for the communicative FL classroom and in turn formulate specific learning objectives for the students in writing as basis for future implementation (Guasch, Espasa, & Álvarez, 2010). In Caterina's case, virtual feedback allowed attending to compromising details, thus improving Caterina's academic and school performance (see extracts 24 and 29 above). Caterina acknowledged that the network-based component served her need to receive exclusive and direct feedback on grammar, an aspect of the English language she considered a weak point in her professional development. In turn, the support she received from her native peers' contributions gave her more confidence prior and during implementation of the teaching sequence she had designed with the help of her face to face and online peers. Very importantly, Episodes 1-3

traced events which guided Natalia, Anaïs and Caterina's reflection on the ways that they came to notice mistakes that they were not able to see on their own and lent to the formation of a conceptual understanding of dialogic learning (which will be further explored in Chapter 10).

Overall, Episodes 1-3 empirically demonstrated that the integration of telecollaboration complemented the face to face tutorials and afforded enhanced opportunities for the three student-teachers to further explore their doubts and weak points regarding planning instruction for the (very) young learners in a FL classroom. They substantiate the argument that the network-based component afforded closer attention to relevant aspects of teacher learning and to strategically plan FL instruction in a different context. It also allowed them more time to engage with specific features in more detail that for reasons of prioritization or limited time were not dealt with in the face to face tutorials. These complementary and mutually contributing relationships between face to face and virtual interactions to reinforcing academic and school performance are schematically illustrated in Figure 9 below:

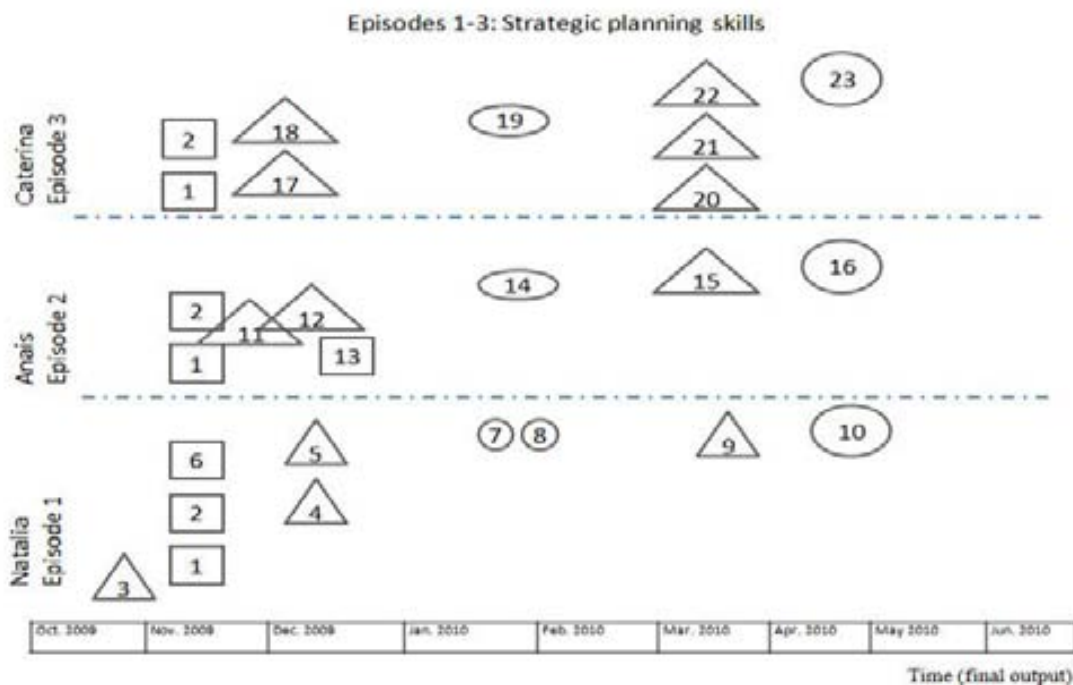


Figure 9: Timeline of events in Episodes 1-3

Events represented in Fig. 9

Episode 1 (Natalia): Developing strategic planning skills for the Very Young Learners' classroom

Event 1: CI (Nov 3, 2009) - Tutor scaffolds reflection on realistic CL/CB instruction: Verbalizing objectives

Event 2: CI (Nov 3rd, 2009) - Learning language to formulate objectives

Event 3: VI (Oct 29th 2009) - Virtual peers question timing

Event 4: VI (Dec 10th 2009) - Peer scaffolding: Peer suggests focus on age-appropriate inputs and objectives

Event 5: VI (Dec 10th 2009) - Virtual peers suggest introduction of communicative events with concrete examples and highlight teachers' role in supporting students' understanding

Event 6: CI (Nov 3rd, 2009) - Tutor's prompt to ensure and support students' understanding

Event 7: SI (Jan-Feb 2010) - Trial and error: It was too short for their short attention span, solution?

Event 8: SI (Jan-Feb 2010) - Concretization of concepts in classroom practice: Leading communicative events in classroom teaching

Event 9: VI (Mar 2010) - Externalizing learned concepts: Independent-like planning

Event 10: SI (Apr, 2010) - Using learned concepts and strategies to evaluate own teaching: Concretizing concept of planning for improvement

Episode 2 (Anaís): Developing strategic planning skills for the young learners' classroom

Event 1: CI (Nov 3, 2009) - Tutor scaffolds reflection on realistic CL/CB instruction: Verbalizing objectives

Event 2: CI (Nov 3rd, 2009) - Learning language to formulate objectives

Event 11: Virtual (Asynchronous) interaction (Nov 2009) - Virtual scaffolding: Learning to verbalize desired language output

Event 12: VI (Dec 2009) - Re-scaffolding: Learning to articulate desired output

Event 13: CI (Dec 2009) - Distinguishing between objectives and teacher goals

Event 14: SI (Jan-Feb 2010) - Authorship in textual productions

Event 15: VI (Mar 2010) - E-tutoring: Using learned language and concepts to design second round of teaching material

Event 16: SI (Apr 2010) - Authorship of learned concepts in textual productions

Episode 3 (Caterina): Developing strategic planning skills for the young learners' classroom

Event 1: CI (Nov 3, 2009) - Tutor scaffolds reflection on realistic CL/CB instruction: Verbalizing objectives

Event 2: CI (Nov 3rd, 2009) - Learning language to formulate objectives

Event 17: VI (Dec 2009) - Virtual scaffolding on constructing communicative instruction

Event 18: VI (Dec 2009) - Peer scaffolding prompting reflection on language to be taught

Event 19: SI (Jan- Feb 2010) - Authorship in textual production

Event 20: VI (Mar 2010) - I'll write and you can check the English

Event 21: VI (Mar 2010) - Peer-tutoring: Externalizing learned concepts on grammar as emergent through communicative activity

Event 22: VI (Mar 2010) - Externalizing concepts: Independent-like formulation of objectives

Event 23: SI (Apr 2010) - Authorship in textual productions

Key:

- Classroom Interaction (CI)
- Virtual Interaction (VI)
- School Implementation (SI)

10. Dialogic turn to language learning and teaching

Overview

Episodes 1-3 (Chapter 9) illustrated the process in which the student-teachers gradually appropriated cognitive tools and strategies for thinking and planning teaching. At several times during that process, the student-teachers externalized their understandings of learning as dialogic by acknowledging the role of others in the process of learning about teaching. Episodes 4-6 (in this chapter) illustrate Natalia, Anaïs and Caterina's own role and contributions to dialogicality and to others' knowledge and document the student-teachers' gradual socialization into the community of teachers. This latter emerged as a second most salient component of the professionalization process and specifically the understanding that learning emerges through dialogue with others to which they actively and efficiently contributed; to wit it appeared 107 times in a total of 649 references. It was initially labelled "Formative teaching and learning practice - Reflective skill" (see Chapter 7). After reviewing relevant literature, this label was reformulated into "Dialogic turn to learning and Teaching" and as such it is cited in this chapter.

The essential tracer of this development is the appropriation and use of discipline-specific language and professional discourse, largely modelled in Episodes 1-3 (Chapter 9), which in turn contributed to the development of a strong sense of self as teachers (Mead, 1934;

see also Reiman, 1999; Edwards, 2007) and teachers' pragmatic competence facilitated through telecollaboration (Cunningham & Vyatkina, 2012). To this latter issue, the curriculum and workforce demand that teacher graduates are able to work in professional teams of the same or different disciplines. To do so, they need to be able to think critically and creatively, communicate orally and in writing, to efficiently and assertively transmit information, ideas and problems in order to improve the quality of education and schooling (see curriculum objectives in Chapter 8).

10.1. Natalia's case

This section reports on Natalia's transformation from individualized to dialogic cognitive representations of learning. Specifically, the product-oriented section relates her end-of-the-year acknowledgement of this reality beginning from her comments on her 'lived experience with feedback', growing confidence with dialogic learning practices to a transfer of similar type of interaction to her own teaching of VYL. The product-oriented section is followed by the equivalent process-oriented one (10.1.2) tracing the mechanisms underlying this turn in her work with multiple others.

10.1.1. Product-based data

At the beginning, Natalia appeared particularly reserved, shy and scared at the idea of criticism and therefore less willing and prepared to engage in dialogic learning. Admittedly, these feelings were barriers to accepting dialogue as basis for her own teaching practices. By the end of the first semester, Natalia documented an affective change towards the practice of feedback i.e., social mediation in the ZPD (Vygotsky, 1978).

Extract 33:

7. A good language teacher must know his supporting role. He can:

- **Accept feedback from his peers and mentors and build this into his teaching (3)**

I think I have improved a lot in this competence, as I have changed my attitude towards feedback. In the beginning of the year, I did not like to be given feedback or to give. With time I have realised that all the projects that I have been received feedback, they have improved a lot. When planning, you can see things very clear, but when explaining to other people, they can see things that you were not able to see. Moreover, the teachers (tutor, English teacher) and my partners have given great ideas to improve my teaching sequence, my Action Research and the podcast. This competence can be clearly shown in my powepoint of my journey as a teacher.

In extract 33, she points to her teaching sequence and the process of designing the podcast and follow-up exercises (and Action Research, which is not analyzed here) as activities that afforded her opportunities to develop competences for planning contextualized, coherent materials that were appealing and appropriate to the students' interests, age and proficiency level in the language. Significantly, she highlights her acknowledgment of the dialogic process in which she came to learn these competences and in turn implies a newly experientially-formed concept that learning emerges through dialogue with others. She states that: "With time I have realised that all the projects that I have been received feedback, they have improved a lot. When planning you can see things very clear, but when explaining to other people they can see things that you were not able to see" (Natalia, final wiki report). In doing so, she relates the understanding that interaction with other people (class and virtual peers) moved her performance to a higher level and helped her to improve both academic assignments (written) and implementation (school teaching).

Following this understanding, Natalia also relates that she became competent in creating opportunities for dialogic teaching in the classroom. At this stage, Natalia discussed what she had assimilated regarding planning contextualized communicative activities for very

young language learners (VYLL), focusing particularly on the role of group work for shared-knowledge building in language learning. In her final wiki report, Natalia presents group work as a valuable resource to organize and systematize her teaching practices. Giving students the opportunity to work together and be actively involved in the learning process was a major achievement for Natalia; this learning outcome can be discerned in the extract 34 below.

Extract 34:

To be honest, until this year the general interaction predominated in my classes were the whole class interaction and the individual work. However, as we have been taught in class of the importance of the pair group, group work, etc., I have tried to put it into practice. Although I knew the advantages of group work and pair work, I did not use them because of the difficulty when managing and because of the noise in class when they work together. I have tried not to be so focused or obsessed with controlling everything.

In extract 34, Natalia states that in her previous experience with learning and teaching (before beginning the courses that form part of the database of this research), she was exposed to teacher-fronted class instruction (whole class interaction and individual work), distributed between teacher and students. She explains that these experiences and her need to ‘control everything’ inhibited her from considering group work activities in her teaching plans, even though she had been “taught in class of the importance of the pair group, group work etc.”. In extract 34, documented at the end of her own learning process and experience with knowledge-sharing and knowledge-constructing with multiple others of different levels of expertise (virtual meetings, group work in MT, school practice), she indicates that she came to accept the ‘noise’ surrounding learning in groups and had become more flexible about noise in her own classroom.

In the same vein, Natalia culminates her transformation towards dialogic teaching practices, in which the students are at the centre of instruction. The students are active agents of their own learning, producing content while the teacher has a guiding role in focusing and building on their productions for further development.

Extract 35:

I have learnt to pay attention to students' production in class. It has been a very interesting experience because I was not aware of how a teacher can learn if s/he listens to the students' conversations. We can learn a lot from them.

Extract 35 is taken from Natalia's wiki reflections and precisely her recollection of the Action Research project (not analyzed here). In this extract, she frames her awareness of this dialogicality between teacher and students as central in teaching and essentially the role of the learners in driving the learning process ("we can learn a lot from them") and applications of dialogic principles to learning and teaching e.g., learning constructed by both students and teachers.

10.1.2. Process-based data

This section traces a series of interactions taken from Natalia's process of designing didactic material and follows on the notions set forth in section 10.1.1. It indicates a transformation in Natalia's understanding of learning as a dialogic process that involves teachers and students and is distributed across multiple configurations of interactions e.g., teacher-students, student-student, under the guidance of her as the teacher. First, these interactions demonstrate Natalia's initial negative reactions to dialogic engagement with peers that was exacerbated by the fact that this dialogue also involved unknown parties. Second, it presents her explicit acknowledgements of the beneficial cognitive load for learning throughout her interactions, in-class and out-of-class, referring to specific

feedback targeted at her unit and also resulting from the open nature of the interactions in which she was engaged. Third, this section demonstrates how this setting enabled her to develop her own voice regarding teaching. Specifically, the setting framed a context for socialization with multiple members of the teacher community, in which Natalia re-applied concepts she had learned and deployed technical language to contribute to others' knowledge, receiving appreciation for her contributions; and at the same time consolidating conceptual knowledge by externalizing it back to the social plane and developing communicative and pragmatic skills as a teacher working and contributing to the wider professional community. This section finishes with Natalia's textual productions, in which she documents her transfer of this mode of learning to her own teaching at the school.

EPISODE 4: DEVELOPING DIALOGIC AND RELATIONAL SKILLS

EVENT 24: CLASSROOM INTERACTION (OCTOBER 2009)

Fear of feedback: Support from tutor

Extract 36 is taken from the very first university tutorial, during which the class was discussing the planned tasks and overall development of the practicum course. The tutor was orienting the student-teachers to the tasks she proposed and their responsibilities as practicing teachers. In this instance, the discussion was focused on the practice of feedback as a central aspect of the tasks, which was to be carried out both online and in the classroom.

This extract indicates the student-teachers' reactions to these proposals. Receiving negative feedback was a concern amongst all student-teachers, but Natalia was the one who became particularly anxious and clearly articulated her worries about the idea of showing her work

to other people, especially people she did not know. In this face-to-face session, she appeared particularly reserved, shy and scared of criticism and therefore less willing and prepared to engage in dialogic learning that could become the basis for her own dialogic teaching. Weaknesses seem to dominate at this point in Natalia's own perception of self, and she finds it hard to balance her feelings and fears of social embarrassment both as an individual and as a novice amongst professional teachers. Natalia positions herself as not confident enough to acknowledge her strengths and share her weaknesses with a larger social community of teachers.

Extract 36:

- 1 UT: are you worried about that feedback a bit?
2 ALI: [laughing]
3 [Everybody in the class starts laughing]
4 UT: why? what makes you nervous about this idea of a feedback with the UIUC
5 group? i can see by your faces that you're worried what natalia?
6 JAU: [laughing]
7 NAT: i don't know your your a big **i don't like people showing my... my work if**
8 **i' m not** i i can look at that and i'm not very proud of that and **if i'm not**
9 **proud of that perhaps they will feel that also**
10 UT: okay so you're worried that about negative feedback
11 NAT: well
12 JAU: **yeah i think we all are worried about...**
13 UT: it's a very valid feeling
14 ADR: it's hard it's hard to **accept** it it's a very valid feeling none of us like criticism
15 UT: **to give... constructive feedback** is not easy **to give negative feedback** is
16 not easy alright because maybe you will think something is not good but you
17 don't want to hurt their feelings okay? so...and to receive negative feedback
18 is very difficult
19 NAT: **yeah we can also learn how students feel when we assess them**
20 UT: Exactly

Specifically, Natalia exemplified her feelings of anxiety in relation to the idea of displaying her work in front of other people. She declared that she was overwhelmed by the thought of sharing her work with other people, known and unknown, and also related her discomfort with exposure of her weaknesses to more knowledgeable others and fear about facing

criticism from others who might think that her work is not good enough (lines 7-8). At the same time, her words imply that her knowledge at that moment did not allow her to ascertain her agency as a legitimate teacher; in other words, she did not seem able to perceive herself as able to give advice to others; rather, she only perceived herself receiving feedback and particularly negative feedback. Natalia was afraid that her online peers would also share these feelings (lines 8-9), which posed an additional challenge for Natalia: to give them constructive/ negative feedback without hurting their feelings.

In line 19, Natalia explicitly acknowledges the power relations involved in critically reviewing others' work and giving feedback by making the analogy between the proposed activity of discussing their teaching units online and everyday teacher-student interaction in the classroom.

EVENT 25: CLASSROOM INTERACTION (OCTOBER 2009)

Getting accustomed to the activity of feedback

As she reported in her journal, her school observations also involved group work, which allowed her to observe the benefits of students' group work. Also in-class discussions helped her progressively become more confident with sharing her work with others (classroom peers and tutors).

Extract 37 is taken from a university tutorial that took place on October 26, 2009.

Extract 37:

1 NAT I'm learning in that session is the for me it's difficult to receive feedback
2 and I'm learning to to see feedback and use it to uh to change and to use the
3 feedback as something constructive and to improve my activities

4 UT to not feel attacked (laughing) to be a little more open-minded I yes it's
5 difficult for me but I'm learning I'm you were the one who said i don't like
6 this at all yeah

In this extract Natalia relates that she was gradually learning to receive feedback without feeling attacked. Classroom and virtual dialogue scaffolded her learning to operationalize the conceptual tools of CL/CB to self-regulate her reasoning and competence in planning contextual communicative and competence-oriented instruction. The cognitive load that she received online regarding her planning is illustrated in Episode 1 in Chapter 9 (see events 1-6). This lived experience with dialogue provided her with empirical evidence on the potential of this configuration for knowledge sharing and construction.

The following event is related with affective aspect of engaging in collaboration with unknown others, which is usually the case of telecollaboration.

EVENT 26: VIRTUAL INTERACTION (DECEMBER 2009)

Online encouragement to dialogue for learning

In the online setting, Natalia became engaged in dialogue, this time with unknown others, which seemed to be an additional concern for her, since she was worried that they would criticize her work, which she would probably not feel “proud of” (see extract 36 above). Natalia did not feel confident with her knowledge of teaching and ability to use it to help others in their designs. This was also implied in extract 36.

Extract 38:

1 jun dice: ok i'm all ears
2 Natalia dice: I want just make a silly question
3 [쿠수] dice: there's no silly question hee hee
4 Natalia dice: in Spain is different and i dont understand the grades : 9-12 th
5 graders (jun's)
6 how old are they?
7 jun dice: oh they're highschool kids 15-17 year olds
8 [쿠수] dice: they are high school students
9 jun dice: 14-17
10 so just before college
11 Natalia dice: oh, ok!! thank you!
12 in spain is 3r or 4th ESO
13 jun dice: i see
14 that must have been confusing

In this instance, Natalia begins her online conversation with her peers by inquiring about the grade classifications in the US. Natalia expresses her awkwardness of engaging for the first time with people she didn't know and alludes to her initial feelings of insecurity, her feelings of being attacked on her limited, as she perceived them, abilities in working with others and giving them constructive feedback (see extract 1 above). Against this background, Natalia wants to "ask a silly question" (line 2). Her peers encourage her to speak up (line 3) and respond to her questions (lines 7-10) and understand her confusion (line 14). This experience can be considered important at the beginning of her socialization process with the teacher community through network-based communication.

In a similar vein, Natalia reported informal and incidental learning from reading and discussing others' work, which she documented at multiple times throughout her online meeting.

EVENT 27: VIRTUAL INTERACTION (DECEMBER 2009)

Acknowledgement of learning through dialogue with virtual others

Extract 39:

- 1 Natalia dice:: i like that is very complete and explain very well what do you want
- 2 to do [...] i think it would be useful for me for improve the writing,
- 3 comprehension and helps the habit of reflection

In extract 39, Natalia considers that the online interaction offered her the opportunity to compare writing styles and improve her own writing skills, to work on comprehension skills, and to further her ability for reflection and critical thinking, all of which were central goals of the practicum tutorials and are considered to be central teacher competences.

Extract 40:

- 1 Natalia dice: I am learning a lot reading your units, the truth is that I didnt know
- 2 about creative writing or critical reading, thanks! now I understand
- 3 better with the 2nd draft

She documents exploring new methodologies for language education i.e., creative writing and critical reading. These methodologies were new for her in the sense that they weren't used at the school in which she was practicing and they were not discussed in the tutorials. Since Natalia's UIUC peers were teaching older levels of students, these were areas of knowledge that had not been covered in Natalia's courses.

These extracts indicate the affordances of open interaction facilitated by open tools such as networks and creating a world of possibilities for learning that move beyond the task per se. In here Natalia refers to informal learning taking place by reading through more expert people's units, comparing her own and reflecting on future improvement.

At the end of the first semester, the student-teachers discussed what they thought they gained from the telecollaboration experience of the first semester. In these discussions, they talked about both direct and indirect learning.

Expressing awareness of beneficial dialogic processes

Extract 41:

- 1 ADR: but sometimes the help is not that you learn directly but only when you
2 get a different point of view is in itself it's a... it's a... [...]
3 NAT: for example creative creative writing they did a unit of creative writing
4 uh a creative activity it's a concept that I... perhaps i'm going to use
5 perhaps or not i don't know

In this instance, Natalia acknowledges that she learned indirectly from her peers' units and refers explicitly to the methodologies of creative writing.

Extract 41 illustrates that Natalia, following her own experience, came to acknowledge the benefits of dialogic learning. Her positive experience with virtual dialogue seemed to overcome her fear of receiving criticism and negative feedback with which she approached the idea of dialogue at the beginning of the course (see extract 36). On these occasions, she explicitly refers to beneficial exposure to others' designs which she perceives as models of good teaching designs (extract 39 above), and a source of new methodologies and classroom methods (extract 40 above).

In light of the above, event 27 below indicates a second component of Natalia's dialogic turn. Such events illustrate that she was developing her own voice as a teacher and becoming more competent at contributing to others' knowledge by externalizing learned concepts and understandings.

The following extracts illustrate examples of instances in which Natalia advised others and received acknowledgement of her contributions, which held affordances for her growing confidence on the one hand and on the other hand helped her to consolidate the knowledge she had assimilated thus far.

EVENT 28: VIRTUAL INTERACTION (DECEMBER 2009)

Peer-tutoring: Bringing in concepts from the classroom to improve collective experience and develop own voice

In Extract 42, Natalia and her peers explore the concept of the teacher's supportive role in the development of effective and meaningful instruction, this time contextualized in Sook's (UIUC) design of her teaching sequence.

Extract 42:

1 jun dice: Would you be going through each annotation?
2 [쿠수] dice: its still not easy even for me..
3 when I used the material (I did this lesson already), I explained to
4 students what some of signals meant
5 (math equation like codes, acronys, etc)
6 jun dice: I guess what i meant was that there's a lot of stuff written on the
7 sample, so
8 you want to make sure the students know how each of it is relevant
9 to what they're learning
10 [쿠수] dice: and the whole point was, to develop the symbol system that you can
11 remember and refer back to
12 sure
13 Natalia dice: i agree
14 jun dice: oh ok
15 yeah. because u don't want any of it to look redundant
16 Natalia dice: about the brain science text you could add a question about the title,
if there
17 is information only reading it, what can we know by reading it..
18 i like the creative titles
19 [쿠수] dice: yeah
20 that is a great idea
21 thanks Natalia

Jun triggers the discussion by pointing out that the supportive material of the classroom should be relevant and meaningful to the students at all times (line 4). She uses multiple strategies to exemplify her argument (lines 6-9). Natalia agrees with Jun's argument (line 13) and contributes her own ideas. Specifically, Natalia uses her understandings of the role of the teacher as a promoter of communicative events and supporter of learning in the classroom to suggest ways in which her peers could improve their units. These aspects of teaching were often discussed in the classroom tutorials (see Episode 1). She suggests that her peer add an activity prior to the introduction of the reading text involving communicative events in the classroom. In this way, the teacher would scaffold the activity by asking questions prior to the actual reading of the text (lines 16-18); as a type of brainstorming of ideas. Brainstorming for students' ideas prior to performing a task was illustrated at multiple times at the university for prompting students' creativity, imagination, engagement and motivation and subsequent production in the FL.

In this light, university interactions counted as authoritative talk for putting forward and analyzing legitimate teaching practices. Natalia's online interactions indicate her receptive role in the university classroom. In contrast, in the online setting, Natalia engaged in active reflection on the concepts she had been exposed to in the classroom and used them to construct feedback for her peers, prior to actually implementing them herself in the classroom. In this sense, the online setting facilitated a space for Natalia to revisit and appropriate her understandings of communicative language instruction that was facilitated in classroom discussions.

The following MSN interaction reflects university discussions regarding assessment and indicates how Natalia revisits her understandings of assessment as an integrated formative

practice, which corresponds to pre-defined linguistic objectives. By the time of this MSN meeting, the issue of formative, objective-based assessment had been discussed on multiple occasions at the university in the context of other student-teachers' teaching proposals and was exemplified by the tutor as peer and self assessment (see for example Event 2, Episodes 1). Natalia seems to use her peer's design to further reflect on and propagate the new concepts that she came across at the university regarding assessment.

Extract 43:

- 1 Natalia dice: Well, i began, in the assessment rubric children are going to do it arent
2 they?
3 Jun: I have liked a lot the changes and implementation you have done
4 and now i can understand better what you are going to do
5 my question is that in the assessment rubric students are going to say the
6 items of the assessment rubric or are you going to provide them ? (I like
7 the idea of the assessment rubric)
8 Jun dice: We'll be creating the rubric as we go along, but I'll have a rubric ready so
9 we can base it on something
10 Natalia dice: nice idea, they can reflect a lot of what they think is worth to learn
11 Jun dice: thanks...hope it works

Natalia begins by drawing attention to the assessment procedures in Jun's design. She seeks first to clarify her understanding of her peers' plans regarding assessment (lines 1-7). Natalia asks Jun about the role she plans to assign to the students in the assessment process and specifically in the redaction and formulation of the assessment rubric (lines 5-7). Retaking classroom discussions, Natalia asks whether the assessment process will go hand in hand with classroom practices, and be needs-based or if it is going to be top down imposed by the teacher. Jun confirms that the students will participate in the content of their learning as the teaching process moves along (lines 8-9), echoing a needs-based learning. Natalia applauds her peer's plans and relates her own reasoning about the pedagogical value and relevance of assessment. As she states, this dialogic approach to

learning will allow for and promote students' reflection (line 10). In this light, the online interaction presents Natalia with another example of dialogic assessment contextualized in her virtual peer's planning and affords her the opportunity to discuss the learning value and potential of such practices.

It also becomes worthwhile, relevant and important to note the way Natalia organizes her discourse in giving critical, yet constructive feedback to her peer, alternating between encouragement/reinforcement about the positive aspects of her unit and suggestions for further improvement of problematic aspects. This type of discursive practice had been very predominant in the classroom tutorials. Practically, throughout their interactions, Natalia and her partners, undertake the task of 'face-positive' discourse to convey an otherwise threatening act such as giving feedback on negative points in others (lines 3-4; 7). At the end of the semester, Natalia herself related a conscious effort in giving feedback without hurting others' feelings. She considered it especially relevant in telecollaborative settings where participants are often strangers to one another (see extract 44 below).

Expressing awareness of dialogic processes for overcoming emotional barriers to collaboration

The following extract comes from a university tutorial that took place on the last day of the first semester (22 December 2009). At this moment, Natalia was discussing her thoughts about accepting and receiving feedback and thus participating in a dialogic learning process with Montse, a fellow classmate in the practicum.

Extract 44:

1 NAT: to accept feedback is actually difficult and... but it's not feedback

2 as a pressure or threatening...you've done it bad. you can... take it or
3 not/ and... [...]
4 MON: and also about giving feedback
5 NAT: yeah\
6 MON: which is quite hard to give feedback to a peer it's different giving
7 feedback to uiuc peers that you don't really know them and...
8 NAT: yeah and you perhaps think... you feel that perhaps he or she is going
9 to feel bad or something like that
10 MON: yes

Specifically, Natalia relates that after her dialogic experience in the classroom and online she has changed her initial perception of feedback as a threat (lines 1-3). Montse points out that giving feedback to UIUC was “quite hard” given the fact that they didn’t know them (line 6-7). At this point, Natalia reflects on her role of both accepting and giving feedback to others. She acknowledges the fact that giving feedback to others implied a conscious effort from her part to communicate effectively in order not to offend or hurt her partners’ feelings (lines 8-9).

Aside from the affective component of dialogue, Natalia underscores the fact that she articulated, externalized and actively defended her understandings of communicative classroom practice in interaction with others. The interaction provided the opportunity to consolidate the validity of such understandings and constituted a cognitively valuable stage prior to her implementation. During her virtual interactions, Natalia transferred theoretical concepts from the abstract other-regulated to the self-regulated plane (see extracts 42 and 43 above).

EVENT 29: SCHOOL IMPLEMENTATION (APRIL 2010)

Transfer: Applying dialogue to classroom teaching

In the second semester, Natalia worked with Imy to create a podcast-based didactic activity which Natalia intended to use to teach food vocabulary. This time she began with a dialogic communicative orientation in mind (see Episode 1, Event 9). Her textual productions from the podcast activity document Natalia's conceptual formation on dialogic learning and teaching and provide evidence of transfer/application into her own teaching for the second time during her academic training.

Extract 45:

POST-ACTIVITIES

The teacher will bring all the food practised in the podcast (sausage, plum, orange, cake, apple, pear, salami). Children will have to do the activity in pairs and come in front of the class to practice the dialogue meanwhile the rest of their partners are observing. Example: one child asks the other one, do you like apples? And s/he gives the other kid a piece of apple. S/he will have to answer: yes I do/ no, I don't. And then they will turn the roles and the other asks and his/her partner answers. (30 min)

After the podcast, students will do an assessment activity in which they will practise the dialogue done in the podcast. It will be a pair-group activity but with whole class interaction (they will do the activity in front of the class in pairs and the other classmates will be able to make comments if they want).

As she documents in this extract, Natalia promotes dialogue in the classroom in two ways: roletaking and free communication in the classroom. This activity provides for natural communication, a feature she was explicitly advised about in her online meetings (see Episode 1).

Similar to her own learning process involving reflection and evaluation of others' work, Natalia plans an informal peer type of assessment giving the opportunity to the students to

actively participate in the learning process and develop skills in evaluating others' work (paragraph 2), which also mirrors her own telecollaborative experience (see extracts 42-43 above).

Arguably, such multimodal instances where she explored teaching concepts in other people's practices became important for developing the concept of dialogic teaching and learning, an objective that she continuously and actively explored throughout her interactions until she reached this new conceptualization. At the end of the year, she stated that she had begun with a strictly teacher-fronted idea of teaching according to which teacher-centred interaction predominated in her teaching, largely due to her fear of letting go control of the classroom (see extract 34 above).

10.2. Anaïs' case

Section 10.2 documents Anaïs' development of relational (transferable) skills i.e., critical thinking and reflection and a strong sense of herself as a competent agent, able to benefit from and contribute to a knowledge-producing community.

10.2.1. Product-oriented data

At the end of the year, Anaïs stated that she became competent in effectively working with others. She evaluated her development against the following components: (1) listen to a diversity of points of view, (2) critically evaluate them on the basis of her existing knowledge and make her own decisions, and (3) help others improve their own work. Her conclusions index dialogic construction of knowledge emerging from interaction with others and active and critical meaning making, taking into account others' opinions.

Extract 46

In my opinion, the Practicum tutorials were an excellent tool to learn how to filter through a huge amount of advice and decide which was better. I think this was part of critical thinking, since I had to listen to all sides (tutors and friends' advice) and then decide for myself what I considered it would be the best option. Likewise, the tutorials were really useful in the sense that I learnt a lot from my mates' experiences. Additionally, I think that we are all very open-minded now, and this is a very positive point. What I mean is that at first it was difficult to talk about what the others did/planned... but now, that we have finished, I realize that our practicum group unity improved a lot from the very beginning. I can see there are some positive group characteristics (such as support, cohesion and friendship) among each other and I am very grateful for it. [...]

In extract 46, she poses as the receptor of a diversity of new information, a context in which she had to critically assess (in her own words "filter through") this information and define her own course of action. Successful engagement in this activity made her feel confident about her decision-making. She recounts how discussing her own and other

people's work was difficult at first, but resulted in the development of positive individual characteristics, such as "open-mindedness", "support", "[group] cohesion" and "friendship", which echo the affective aspects of her engagement in dialogic learning.

She further clarifies the point of criticality involved in her task development this time as an essential attribute of the good teacher.

Extract 47

What is more, a teacher must be a critical thinker, not for criticizing everything but for being capable of distinguish what is credible and what is not; a teacher has to be able to build his/her own paradigm, opinion and personality without being influenced by others.

In extract 47, Anaïs describes being a critical thinker and competent in autonomous, yet interdependent decision-making as important features of a teacher. As she states: the teacher "has to be able to build her own paradigm, opinion and personality without being influenced by others". Her words imply her understanding and awareness that learning and teaching involves engagement with others; it is a dialogic process, to which she appears willing to participate.

10.2.2. Process-based data

Episode 2 (Chapter 9) illustrated multimodal interactions that contributed to Anaïs' learning to envision her role in the classroom in terms of defining and formulating objectives, and in general organizing and evaluating CB/CL instruction. Episode 5 in this section traces the developmental process of critical thinking skills from the receiving standpoint (depicting Anaïs inquiring and learning from class and virtual others) to the contributing standpoint (giving advice to others).

EPISODE 5: DEVELOPING DIALOGIC AND RELATIONAL SKILLS

Episode 5 below indicates that the virtual meetings afforded significant occasions for such development. An essential component of Episode 5 is how Anaïs deploys teacher discourse to socialize with the teacher community to contribute to others' knowledge; in turn further develop understandings of her own classroom experiences (Edwards, in press), and a growing independence in making her own decisions.

Everyday concepts regarding teaching

In order to ground the importance of the following multimodal interactions it is relevant to consider the following interaction. This interaction took place in the second university tutorial, during a small group discussion about expectations from the practicum. Anaïs appeared aware of her needs to learn more as a teacher to make her feel more confident in the classroom. She shared her classmates concerns about collaborating with more expert others but at the same time appeared more confident than Natalia when first introduced to the idea of virtual exchange. Anaïs stated that she accepted that her UIUC peers would know more than her in some areas, but that seemed to make her even more willing to learn from and teach them in a complementary way.

Extract 48:

- | | | |
|---|------|---|
| 1 | ADR: | so can you identify a specific area that you need to work on to improve |
| 2 | | are you aware of your needs? |
| 3 | ANA: | I realise what for example because when I'm in... facing a class I think |
| 4 | | I still need to improve <u>everything</u> it's like hm... it's the whole |
| 5 | | experience that I need |
| 6 | MON: | Experience |
| 7 | ANA | for me it's like that for example [...] I think I need to improve on everything |
| 8 | MON | all of them yeah |
| 9 | ANA | I'm also <u>beginning</u> and and I don't feel I feel when I'm in front of the |

10 students i feel confident but not enough to stay with them X everything
11 and I'm hoping to improve I I know I need to improve class
12 management... everything communication labeling... ah when I when I
13 before doing a class if I can I... try to... bear in mind all these areas in
14 order to have a class as motivating as possible
15 MON: uh-hm
16 ANA but I don't know if it's good enough[...]

In extract 48, Anaïs talks about her need for empirical support regarding appropriate classroom practices (lines 3-7). She refers to specific teaching-related concepts such as communication, classroom management, and students' motivation (lines 9-14). As she reveals, at that time she was aware that these concepts were at the core of good teaching; however, her understanding of them seemed to be largely intuitive. On the one hand, these concepts were "deeply ingrained" in her mind as relevant to suitable aims and methods for foreign language teachers, but on the other hand, they were largely abstract, unarticulated and not empirically referential (Johnson & Arshavskaya, 2010). According to Grossman, Smagorinsky, & Valencia's (1999) levels of appropriation, Anaïs was mainly drawing from her observations of the classroom during previous academic formation, and had appropriated some surface features of these concepts. Yet, at this stage, she does not relate specific empirical features or critical rationale to the concepts in order to advocate for their learning potential for the FL classroom. As she herself states in line 16, she is unsure about her understanding of these concepts and her own ability to implement them for FL learning.

In the following, Anaïs begins her trajectory towards benefiting from and contributing to dialogicality; thus gradually transforms abstract concepts such as communication, motivation, and students' engagement into formal knowledge. Anaïs focused her inquiries on the issue of assessment, following university directives on dialogic configurations of

assessment, aiming at learning and improving learners' performance. Event 29 presents one instance of such directives, which took place shortly after the student-teachers had returned from intensive school immersion (a three-week period).

EVENT 30: CLASSROOM INTERACTION (OCTOBER 2009)

Setting the grounds for dialogic teaching: Assessment for teachers, students, or both?

Montse shared her experience with assessment in the class recounting how a student cried when she received a bad mark in front of the whole class. This was an emotionally loaded classroom incident that triggered conceptual conflict on the issue of assessment. This incident became the basis of classroom discussion on the learning potential and constraints of teacher-centred assessment and exploration of alternative methods and processes.

Extract 49a

1 UT what was the purpose of finding out who had got it correct?
2 MON to know how the activity was done
3 UT okay but um that one for you
4 the purpose for you to ask them that was to see how many people had
5 gotten them correct you could have taken out the papers for that. For the
6 students what was the purpose for the students?
7 MON XXX and....
8 UT knowing who got how many correct?
9 MON there was no purpose for the students but... after doing the class I
10 thought about... well someone who is a little bit shy doesn't want the others to
11 know he only got one correct answer
12 UT yeah I think I think it's a very good question I congratulate you for
13 bringing this up uh... assessment is not easy and I said it over and over in
14 class uh you've got to know why why are you asking them this question? For
15 you and for them especially for the students who got zero or one I mean
16 they've got a problem so the question is what do you do now that you have
17 information about students who got one right or none of them right what do
18 you do with these students you see? I think the point you need to know which
19 students don't understand it at all because you gotta help them somehow so
20 you got this information one thing is whether you got the information the
21 correct way but another thing is what you do with it cos if all you do is ask
22 and then don't do anything with it then effectively you've just embarrassed
23 them yes see if I'm a student what did you say fourth grade fifth grade and the

24 teacher has asked me to raise my hand and I have to show that I didn't
 25 understand jack squat and then the teacher doesn't do anything to help me I
 26 just fell like that I've just been humiliated do you see what I mean? Why do
 27 they even ask me this information just to show me that I'm stupid? You know
 28 unless it's to... to maybe okay you who got all right? Can you work with
 29 Johnny ho had problems would be a possibility. I think you have to ask for the
 30 assessment why are you doing it? And what are you gonna do with it
 31 NAT i think it promotes competition
 32 UT in a way i mean obviously the little girl in the pink shirt i got all five of them
 33 got (laughing)
 34 JAU It is motivation

The idea of inclusive or formative assessment or assessment for learning is operationalized in the tutor's discourse, in which she again uses similar cognitive tools for reflection e.g. "what's the purpose of..." (lines 1; 4-6), "why are you asking them this question" (line 14) and "if I'm a student..." (line 23), "why are you doing it and what are you gonna do with it" (line 30). In doing so, she effectively creates an analogy between themselves and their feelings in such a situation and at the same time gives directives on the need for the assessment to have a formative component; that is to aim at students' progress and not merely the teachers' task of giving marks.

The underlying ethics of assessment

In the following extract, taken from the same university tutorial, the tutor relates her thoughts about the way assessment is carried out in Catalan schools which involves public announcement of students' marks. The tutor is American, whose schooling was carried out in the US.

Extract 49b:

35 UT i said if you remember the first day that i said that the way we teach is also
 36 cultural there's a cultural base there uh and culturally i am i'm a little bit
 37 surprised by the way assessment is done here so publicly it does surprise me
 38 um i remember seeing a video on tv and it was going over about... it was a

39 video about instit- *institutos secundarios* and it was all about how it's...
 40 horrible horrible i mean the whole video was very biased and prejudiced but it
 41 showed a teacher and the teacher was handing out i think handing out reports
 42 calling out their names ye ah/ *adrian un cero a veure home a veure veure si
 43 pots fer*... things like that *ah i clar l'Anaïs un suspès com sempre*
 44 JAU but we were assessed that way
 45 CAT we are used to...
 46 JAU yeah we are used to be assessed that way
 47 ANA Yeah
 48 NAT Yes
 49 UT I think it's horrible

The student-teachers acknowledge this way of assessment as a normal practice at the school and also their own experiences as learners. Caterina and Jaume confirm that “they are used to being assessed” in public. Adrian, Catalan-Czech who grew up and was educated in the Czech Republic, and ‘more experienced other’ shared information about assessment deriving from his readings of Chomsky’s biography, who, as he relates was never assessed, implicitly questioning the value of assessment for learning.

Introducing the concept of formative assessment

Bridging this polar view between teacher-centred public assessment and no assessment, the tutor relates the following:

Extract 49c:

50 UT well i think we can't escape assessment we are in a system that obliges
 51 us to assess. well one thing is using assessment as guidance and another thing
 52 is using the assessment to evaluate the students and give and um... in the
 53 system we work and live in we are expected to do both now if you can
 54 reach a point where your assessment techniques and strategies both help
 55 and allow you to evaluate their progress and put up a mark then you've
 56 basically performed a miracle. Not quite but this is what you should aim
 57 for is that the assessment is going back to them to help them to see where
 58 they need to work and what they need to improve and giving them
 59 opportunities to improve in that area. Continuous assessment for me is just
 60 about the only way you can go for me / this playing it all on a final exam/ or
 61 on some sort of one term of assessment at the end of they year you know. 'if a

62 student's participating and he's been trying and then all of a sudden are asked
 63 to speak for one minute in english and this will decide whether they' re gonna
 64 pass or fail that's not for me that's not a fair assessment ,not saying you
 65 shouldn't do that not saying you shouldn't have them try to speak for one
 66 minute but if their whole mark depends on one minute the child's in a lot of
 67 pressure yeah?... which is the typical um i would call this ad hoc sort of
 68 assessment
 69 ANA what does it mean?
 70 UT ad hoc is um latin for random oh well let's do this sort of... yeah

Voicing the authoritative talk around this issue, the tutor relates that the basic twofold goal of assessment in education should be to measure learning outcomes on the one hand and helping students to improve their practices, on the other (lines 54-56). As a teacher herself, she argues that continuous assessment is the only valid practice (lines 59-61) and rejects the one-time “ad hoc” assessment just for the purpose of assessment as a non-valid and non-productive practice, which is unfair to the students since it adds a lot of pressure on them (lines 62-68).

Noticing the status-quo of assessment practice at the school, Anaïs documents this tendency towards the traditional teacher-fronted assessment in her journal.

My school tutors don't use these types of assessment

Extract 50:

15th November

There's a difference between my general tutor assessment's methods and my English tutor ones that I would like to highlight.

My general tutor includes several self-assessment questions in the exam (such as "*which mark do you think you'll get?*" or "*how much time did you study? with who?*") whereas my English tutor doesn't. Why? I still do not know. Further on, I'll probably ask my English tutor why does she always evaluate students following the assessment sheet there's in the teacher's course book guide. Maybe she has never thought about group, peer or self assessment...

Anaïs, along with the majority of student-teachers in the tutorial, remarked that essentially teacher-focused was the usual practice they saw at school, which they felt inclined to and indeed reproduced themselves in their first informal teaching implementations. At the same time, the student teachers were exposed to discussions at the university where alternatives to teacher-fronted assessment were put forward and they had experiential learning with peer assessment methods at the university and experienced first-hand the act of evaluating virtual peers. This became a context for them to compare the learning potential of such methods. The following conversation in event 31 leads on from university discussions about assessment (see for example extract 49 above).

EVENT 31: VIRTUAL INTERACTION (DECEMBER 2009)

Asking about the practicalities of assessment

Following these conversations, Anaïs pursued learning ways of making assessment more relevant, meaningful, fairer, and less threatening for the students. She asked her virtual peers about ways she could move beyond the assessment procedures suggested in the coursebook and organize and implement formative assessment. Similar to Episode 2, where the virtual peers shared aspects of their own university instruction and teaching experience (see SWBAT), this occasion also accounts for collaborative dialogue between peers of diverse experiences, expertise, knowledge, and teaching backgrounds exchanging resources to help each other to develop their practices; in Vygotskian terminology, they are enacting scaffolding in their ZPD.

Extract 51:

- | | | |
|---|------------|--|
| 1 | Imy dice: | Anaïs, you were talking about what to assess, right? |
| 2 | Anaïsdice: | Yes |

3 that's the hardest part for me [...]
4 cho73 dice: how much assessment does your institution require?
5 Anaïs dice: students do a unit and teacher assess them at the end of this unit by
6 doing a prepared exam that sis included in the theacher's guide
7 course book
8 Imy dice: ah, so you have to prepare an exam?
9 Anaïs dice: for FL teachers in Spain everything is planned in the coursebook
10 but I don't like to follow cooursebooks
11 if I want yes but I don't want to [...]
12 I want to evalute students by continuous assessment and by the oral
13 presnetation they'll do in class
14 Imy dice: do you know what assignments or activities you will use to assess
15 these students otther than the final presentation?
16 cho73 dice: for fair assesement you can make it clear assessment standard
17 Imy dice: yes a rubric!
18 cho73 dice: yeah that's what i wnated to mention
19 Anaïs dice: [...] what do you mean by a rubric?? [...]
20 Imy dice: a page that spells out what an assignment is being evaluated on [...]
21 Have you seen our professor's websit, The TESL REading and
22 Writing Forum? I have some example Rubrics there [...]they're
23 for much more advanced students, but we saw a classmate
24 present a children's rubric today in class
25 Anaïs dice: I hven't seen your professor's websit
26 Imy dice: <http://www.eslweb.org/resources/>
27 Anaïs dice: Thaaanksssssss
28 cho73 dice: if you cannot find pl remind me, i can e-mail you an example
29 Imy dice: Here's the link to my
30 post:<http://www.eslweb.org/resources/index.php?topic=952.0>
31 Unfortunately you can't see the attached rubrics unless you
32 register with the site. It's free though.[...]
33 Anaïs dice: where do I have to look for your mate's rubric [...]
34 Imy dice: we'll find that other rubric and send it to you
35 Anaïs dice: thank u again for all your help
36 cho73 dice: no problem
37 Anaïs dice: you're great peers!

Specifically, Anaïs assumes the responsibility of her learning and engages in a quest to find resources to further complement and reinforce her knowledge of continuous assessment. She explains that she wants to include other types of assessment and requires ways she could do that (lines 2-3; 5-7; 9-13)

Responding to Anaïs' request, both UIUC peers, Imy and Cho help her with practical aspects of assessment (lines 18). They suggest the concept of fair “clear assessment

standard” (line 16) and offer a site of assessment rubric examples that they use in their own practices (lines 20- 26).

This ‘targeted assistance’ by more expert peers to specific weak aspects of planning generates feelings of excitement in Anaïs. She repeatedly acknowledges the cognitive load and support received through this concrete scaffold (line 27; 35).

The virtual targeted interventions provided models as basis for Anaïs to create her own rubric and seemed to further encourage Anaïs to go beyond the teacher assessment usually adopted in the school and explore new ones.

EVENT 32: CLASSROOM INTERACTION (DECEMBER 2009)

Re-take/scaffolding of student-centred assessment

The idea of rubric was later picked up and further elaborated in ‘expert talk’, this time in relation to teacher assessment.

Extract 52:

- 28 UT if you've given them the guidelines then you can use that turn it into a
29 sheet did your peers present themselves XX? no then final comments
30 so you could talk about intonation of voice speak up things like that
31 things that students don't really think about
32 JAU XXXXXXX. Is there voice in a proper way?
33 UT yeah give your names first... give the title of the presentation...
34 JAU yes XXXXX
35 ALI uh-hm
36 UT and then as i said you could turn that into the remember sentences
37 whatever you turn them into the peer assessment evaluation because
38 you've warned them in a way this is what i'm looking for yeah?

Specifically, the tutor further exemplifies the idea of transparent and objective-based assessment. She suggests that Anaïs use the guidelines she plans to give to the students to perform their tasks as criteria that will be used for peer assessment (lines 28-31).

The following interaction illustrates the second component of Anaïs' identification process into the community of teachers. In the first part, she requests professional help from her virtual colleagues on specific aspects of her teaching. In this second part, she assumes the role of the professional teacher.

EVENT 33: VIRTUAL INTERACTION (DECEMBER 2009)

E-mentoring: Contributing to others' knowledge of the premises of CB/CL instruction

The following interaction may be perceived as an 'e-mentoring' type of conversation between Anaïs and her peers, Imy and Cho. In the first part, Anaïs positions as the expert in childhood/primary education. She 'interrogates' her UIUC peer, Imy, about the objectives she wants her students to reach at the end of her unit and questions the feasibility of these objectives. In doing so, she acts as an 'instigator of reflection' for her peer encouraging her to reconsider the validity and feasibility of these goals.

Extract 53a:

- | | | |
|----|-------------|--|
| 1 | Anaïs dice: | so Imy, what I've understood is that you wanna work on the 4th basic |
| 2 | | skills in a Primary school |
| 3 | Imy dice: | yes, but the ultimate goal is for students to write phrases in their diary |
| 4 | | so I'm thinking our final activity before the diaries will be do draw a |
| 5 | | zoo together as a class - groups of students working on each animal |
| 6 | | Cage |
| 7 | Anaïs dice: | phrases such as |
| 8 | Imy dice: | "How many monkeys are there?" "There are five monkeys." |
| 9 | Anaïs dice: | questions and affirmative sentences |
| 10 | Imy dice: | for the diaries I can ask about our zoo poster "How many monkeys are |
| 11 | | there in our zoo?" and the students can write down "There are 5 |
| 12 | | monkeys in our zoo" in their journals |
| 13 | Anaïs dice: | but Imy are you gonna work with 7/8 year old children? isn't it? |
| 14 | Imy dice: | yeagm that's the thing, even those phrases may be too difficult |
| 15 | Anaïs dice: | I think so.... |
| 16 | | 7-8 year old children are still learning how to write in their mother |
| 17 | | Tongue |
| 18 | Imy dice: | So maybe I should write the two phrases on the board and they can |
| 19 | | copy, changing the names of the animals each time? |
| 20 | cho73 dice: | do you think it will be their first exposure to En? |

- 21 Anaïsdice: and produce their own writing is difficult unless you let them write as it
 22 sounds, without correcting ortography, which is a thing I'm really in \
 23 favour!
 24 cho73 dice: if u keep repeating they will figure it out i think
 25 Imy dice: If I tell them to write something, they usually ask "come se escribe?"

Based on her knowledge and experience with this age-group of learners, Anaïs emphasizes the students' cognitive level, existing knowledge and linguistic competence as key factors in evaluating the cognitive load of the tasks that Imy proposes (lines 13-17). Similar to the tutor at the university, Anaïs' online discourse displays features of Socratic questioning i.e., clarification questions, experience and knowledge-based evaluation of suggestions to constructive mentoring, acknowledged by her peer (lines 13; 16) to uncover underlying assumptions and implications in her peers' planning and in turn to probe reflection and critical thinking. In lines 16-17, Anaïs warns her peer about the limited cognitive capacity of 7-8 year old students for performing writing tasks in the FL and proposes that a more feasible goal for this age group of students would be to prioritize production or meaning over accuracy, which, as she states, is her own stance on this issue (lines 21-23).

In the following extract, Anaïs puts forward her own views regarding the emphasis that should be placed on orthography in students' writing in a communicative-oriented learning scenario and argues about what would be more appropriate teacher goals for this age group of students.

Your teaching should be communicative first

Extract 53b:

- 25 Anaïs dice: the fact of the matter is that students should write something they've been
 26 hearing in moer than one class, so that's an easy way to memorise and
 27 produce what you've been hearing from your teacher, and if they ask you
 28 "como se escribe?" you can show them the good way to write a word
 29 cho73 dice: they can describe color...

30 Imy dice: yeah, I need to arrange the other materials before this final activity to
 31 introduce and reinforce the structures
 32 Anaïs dice: but is copying phrases useful?
 33 Imy dice: I know, its not communicative
 34 at this level, if they can connect the sound of the phrase to its meaning to
 35 the shape of the words on the board, that's a major achievement for them!
 36 Anaïs dice: I think cpying could be useful if they really know what are they copying
 37 and what for beacuse if not students can lose thir interest
 38 cho73 dice: for later activity, how about let them write about their favourite animal or
 39 their pet?
 40 Anaïs dice: I'm not totally against about copying, at least at that age
 41 That's great

In extract 53b, Anaïs encourages Imy to contextualize her language teaching into “something that the students have been hearing in more than one class” (lines 25-26). This embeddedness of language in the students’ routine would facilitate, as she states, “memorization” of the language (lines 25-28). Then she advises her peer to scaffold writing skills according to the needs of the students as they emerge during the development of the task (line 28). In this sense, her understanding of language learning and teaching can be considered a step beyond teacher-controlled language production or de-contextualized pre-defined forms of language introduced top down by the teacher to the students.

Imy acknowledges the validity of Anaïs’ arguments and the need to restructure/re-sequence the lesson materials to reinforce the pre-activity sections to embody her peers’ ‘linguaging ecology’ as essential condition for subsequent teaching and learning (lines 35-36).

Anaïs continues to reflect on Imy’s propositions. She questions the learning relevance of having the students copy phrases from the board (line 32). Imy had previously proposed this strategy for promoting writing (lines 18-19). Imy argues that copying can help the students connect the sound and written form of the language taught, which is as she states, a valid goal for young learners’ cognitive abilities. Anaïs agrees with this argument but

stresses the teacher's role in making sure that the copying activity remains meaningful for the students (lines 36-37). Further along in this online interaction, Anaïs evaluates Cho's suggests to assign the students to write about their favourite animals or their pet, which Anaïs evaluates as "great" (lines 38-39; 41).

Picking up on Cho's idea, Anaïs models a sequenced teaching plan for meaningful learning that empowers students to use the language.

UIUC take up suggestions

Extract 53c:

47	Imy dice:	I've just described the last two activities of the day writing
48		about their favourite animal would be great if they had more English
49	Anaïs dice:	Leting them write about their pets or favourite animals can foster their
50		motivation!
51	cho73 dice:	you can show them model essay
52	Imy dice:	I like the idea about sharing their pets
53	Anaïs dice:	but you'll ahve to work on parts of the animals' body....
54		how about creating a weird animal?
55		like "it's got a lion head, a monkey body and a snake tail"
56		children are really creative and like imagining things
57	Imy dice:	that's cute! there's another day at camp about body parts and clothing
58		I might bring back the animal vocabulary then
59		and have them talk about animal body parts
60	Anaïs dice:	I've done these kind of weird animals with 9 year old children and it
61		really worked, they love to present their own animals' creation!

In this part of her interaction, Anaïs grounds the concepts of motivation and student-empowerment as essential in teaching endeavours. Nonetheless, Imy appears discouraged by the low writing proficiency of primary education students and hesitates to consider Cho's idea (lines 47-48). Anaïs points out that having young learners write about their favourite pet would foster their motivation, evaluating the task from the students'

perspective (lines 49-50). Cho suggests that Imy supports this process by providing the students with a model essay (line 51). Following up on Cho's suggestion of model essay, Anaïs highlights the teacher's role in generating the conditions for the desired output to develop, in this case students' learning about animals in English. She suggests writing about weird animals and identifies example structures needed, again acting as a professional teacher, she is aware of the specifics of her context of instruction, and thinks creatively and communicates appropriate ideas for the classroom (lines 53-55). As Anaïs states in line 56, writing about weird animals would appeal to the creative nature and imagination of children. Then, Anaïs shares her own experience with teaching language in the primary classroom. She relates how this activity succeeded in fostering children's motivation in her class and her students' positive reactions to this task, which holds her accountable for the validity of her suggestions (lines 60-61).

It is interesting to note the dialogic processes through which the conversation progresses and the agentic role of the participants in developing the conversation. Anaïs takes on an active role in providing the cognitive resources e.g., teacher discursive genres, experience of classroom 'reality' to guide her peer through appropriate thinking and 'course of action' to the problematic situation at hand.

Anaïs' interactional activity denotes an instance of social roletaking (Mead, 1934; see also Reiman, 1999); that is drawing on multiple perspectives i.e., tutor, students, general teacher culture, own experience. This is generated by the demand to act like a professional teacher and critically evaluate appropriate instruction. The affordances (Van Lier, 2000) of the virtual setting generates opportunities for pragmatic social roletaking underlying reflection (Reiman, 1999). This is highlighted when this interaction is brought to bear against an

earlier discussion at the university, during which the topic of assessment was discussed amongst different protagonists. The analysis of this earlier university tutorial (Event 34, extract 54 below) further substantiates the learning significance of the above extract in terms of reflection, consolidation of own understandings and pragmatic competence in effectively and efficiently communicating ideas and suggestions to other professionals to the end of improving quality of instruction.

EVENT 34: CLASSROOM INTERACTION (NOVEMBER 2009)

Tutor-scaffolding: Focus on meaning or form?

On another occasion, Anaïs inquired about the issue of correct spelling and ways to go about this in communicative-oriented instruction. Her concern alluded to a common debate in this pedagogical framework of instruction, finding the balance between two - often polar stances in language teaching. The video recording substantiates the vertical distribution of learning, in which the tutor has the role of the expert in the culture of teachers, therefore Anaïs addresses the question to the tutor of ways to productively bridging the issue between form and meaning.



Picture 6: Anaïs' direct inquiry - What should I do about orthography [spelling]?

At the time, Anaïs disclosed an interest in immersing students into writing as a form of communication in English, but was struggling to find a balanced approach to the issue of writing accuracy or oral fluency. She implicitly acknowledged her limited real in-class teaching experience, which did not allow her to assume that level of autonomy to make any informed decision at that point, and she solicited feedback from "more knowledgeable others" (Vygotsky, 1987). She specifically inquired about the teacher's stance and role on this matter and sought pedagogical ways to legitimately overcome this boundary.

Extract 54:

- 1 ANA and and... because children most of them write and they make mistakes
- 2 no? Orthographe you know? And what should I do? Correct everything?
- 3 or maybe... because for me it's okay if they write lion with an -a instead
- 4 of -i...
- 5 MON well for me I would forget about the article because I think what she's
- 6 saying about the... I think they are not prepared but...
- 7 UT she's saying her students are prepared she thinks her students are prepared
- 8 ADR why don't you write drafts? and I suppose they can write drafts and in

9 drafts you don't care about mistakes because if you care you stop there
10 ANA Yes
11 JAU i'd publish the final article as they wrote
12 UT you can... there are ways... you can you can eliminate some of the
13 errors. for example one group writes their article and they have to give it
14 to another group to read to find the mistakes see if you can find any
15 mistakes help this group you don't say find mistakes you say okay help
16 this group do exchange and you can do that one time two times three
17 times and someone will see each other's mistakes

Anaïs revealed that her concern had more to do with the wider social community surrounding the school more than the classroom itself i.e., school teachers, parents. Thus, she solicited guidance on whether she should place the focus on orthography or maintain a more lenient approach to the matter (lines 1-3). The student-teachers seem to resort to 'one or the other' solutions. Their discourse revealed a tendency to immediately reject practices that seem inaccessible. For instance, Montse rejected the idea of the writing task because, as she states, students were not prepared for it, while Adrian suggested writing drafts, which would lower the expectations for accuracy and therefore 'justify' the presence of spelling mistakes (lines 5-8).

The tutor, representing 'authoritative talk' of legitimate language teaching and learning, intervened to provide ways of bridging these boundaries in ways that relate to the goals of student-centred and continuous assessment (lines 12-17). The interaction continued in a vertical configuration of learning from tutor to the student-teachers, during which the former introduced new content i.e., peer corrections as a method for formative assessment. Anaïs later discussed the issue of assessment with her online peers, who suggested model assessment rubrics for her to create her own (Event 30, Extract 54). She then created her own rubrics in the form of guidelines for teacher, peer, and self assessment.

At the time of her virtual meeting, Anaïs took a firm stance towards the communicative approach to language learning and teaching and articulated her understanding of the conditions that she perceived as favouring to ‘learning language by doing language’. In her argumentation, she articulated her stance as a teacher to transform the classroom into a “linguaging ecology¹⁸” i.e., create conditions that are meaningful and motivating for the students, and to support the students in using and producing English. What is more, she related her own experience in the classroom with a similar practice. This event demonstrates that Anaïs, in the virtual setting, uses concepts she had learned in the classroom and concretized in school experience to contribute to her peers’ knowledge. In doing so, Anaïs consolidated her own learning by externalizing i.e., bringing internalized knowledge back to the social plane, which until that moment were passive, in the sense that they weren’t explicitly articulated through language. In other words, these understandings weren’t externalized until that moment, they had remained on the private plane (Derry, 2000; Edwards, in press).

EVENT 35: SCHOOL IMPLEMENTATION (JANUARY-FEBRUARY 2010)

Transfer: Application of dialogic learning in classroom practice

Moving to learning as product, Anaïs planned for continuous assessment involving varied types of student-centred and student-led assessment. First, she used the cognitive tools offered by her tutor, class and virtual peers to devise a rubric for peer assessment. Second, she enacted her understandings of dialogic learning process.

¹⁸ Language borrowed by the theme of 30th Summer School of Applied Language Studies “Insights into applied linguistics: languaging, agency, and ecologies, held in Jyväskylä, Finland in May 2012.

Extract 55:

7. Assessment

I'll do a continuous and final assessment.

Continuous assessment: students work and effort focused on the interview will be assessed by filling in an individual assessment sheet (self assessment) about impressions, difficulties encountered, things students feel they've learn, and so on.

Peer assessment: each group will evaluate the other groups' presentations according to the minimum posters' requirements (I'll make an assessment worksheet for them to complete)

Final assessment: posters' presentations will be assessed by students (according to the minimum posters' requirements).

Reflection upon the job students did all together, as a whole group. Impressions of the experience: good points and difficulties students have found as individuals. I'll pass a paper with happy faces (it will be like a kind of self assessment)

Extract 55 reflects Anaïs' understandings of peer evaluation which she transforms into her own learning scenario through dialogically-enacted continuous assessment. In her assessment scenario, the students act and regulate their learning process, based on explicit evaluation criteria. In doing so, she enacts the virtual feedback of establishing coherence between (teacher's) assessment and linguistic goals. The tutor and virtual peers had informed her of these alternative types of assessment, modelled actual classroom implementation and provided concrete and practical models of organization of such practices i.e., rubrics for materializing long-term objectives (see also voices from Episode 2). In addition, Anaïs enables students' voice at all stages of the implementation e.g., presentation of findings, overall evaluation of experience, opinion of others' presentation. In these textual productions, she articulates conditions for promoting dialogue between the students in the classroom for them to reflect on their own and others' work.

In her end of year presentation, Anaïs recounts that her interactions with multiple members of the teacher community contributed to a positive socialization process in her professional

community and set the grounds for facing the future with confidence in her own competences as a teacher.

Projecting concepts and skills learned into the future

Extract 56:

1 ANA these (points to the powerpoint) are some of things i did here at he uab which were
2 the tutorials the vignettes the microteaching the online exchange with uiuc students
3 and the action research these are some things which has made me for example to
4 write constructive feedback as i gave to you in our sessions... tutorial sessions then
5 i've learned to filter through the advice you gave me and decide which was better
6 for me then i had experienced... lot of group work and pair work which i think is
7 very good and the last point for me it's... it's key because it's very difficult for me
8 or it was very difficult for me and still is to tolerate ambiguity in the sense
9 that i... i always try to control everything and organize and plan... and
10 this is hard and I can't control a hundred percent the class so...[...] so all these
11 and other things has made me gain confidence in my own decision-making and
12 ability in front of the class become aware of the amount of values and
13 contents we teach we are a model and uh... and melinda as you say... we are all
14 models and students are like sponges that acquire everything and learn everything
15 [,,] jokay another thing uh... is to think about the importance of communication
16 among teachers this is basically with... linki* linked with the... teachers' meetings
17 that communication goes beyond school and and you... you have to go beyond
18 your class you have to communicate with all the school members and also
19 with the students' families and then I have reflect on how
20 important is to plan and work in group

Anaís enumerates the various dialogic activities she was engaged in as basis her own learning and development. Specifically, she relates the tutorials, the microteaching and her online exchange with UIUC partners and action research (lines 1-3) as underlying her learning about teaching and development of critical ability as a teacher (lines 5-6). What is more, she emphasizes her experience with group work and her awareness of the need for flexibility and tolerance towards ambiguity, acknowledging that full control of the classroom is not realistic (lines 9-10). She acknowledges that participating in multiple

group work, and sharing and discussing concerns with other student-teachers helped her to become confident in making decisions about learning and teaching practices; in turn, she became confident in her own ability in front of the class (lines 11-12). She reveals an awareness of her role as a teacher; to be a model of both values and contents (lines 14). Towards the end of her oral presentation, Anaïs speaks about the awareness of her responsibility to “communicate with others beyond the class” (lines 16-17). In doing so, she relates the understanding that she is working in a dialogic context involving not only the students inside the classroom but also the teachers at the school and as she specifically states, the students’ families (lines 18-19). This latter point is more explicitly evidenced in Anaïs’ emphasis on the importance of planning and working in group (lines 19-20).

10.3. Caterina's case

This section relates learning outcomes in terms of a self-edifying process of identification to the community of teachers, in the case of the third focal student-teacher, Caterina. In the extracts displayed in the product-oriented section, Caterina relates the development of a strong sense of self as teacher and confidence in her ability to effectively deploy teacher's discourse to communicate her knowledge and experience to help others.

10.3.1. Product-oriented data

In the following extract, Caterina highlights her own role in giving support to others and contributing to others' learning and knowledge development.

Extract 57:

“A good language teacher must know his supporting role” is the fifth main competence that EPOSTL talks about. EPOSTL says a good teacher should know his supporting role. I would like to highlight a competence which I think I have achieved and which is related to critical thinking: “A teacher should critically assess his teaching on the basis of experience, learner feedback and learning outcomes and adapt it accordingly” as well as giving constructing feedback to our partners. I think in Practicum sessions we worked a lot on that and I assimilated it. It implies lot of work but it is accessible and very useful so I would like to continue working on it and apply it on my future teacher.

In extract 57, Caterina relates the competence of working with other people and to apply critical thinking regarding her own and others' work using her experience and knowledge as basis. Extract 58 relates the role of the social context in this development.

Extract 58:

I have grown up as a teacher and as an individual, because starting to plan your own lessons always helps you to keep your feet on the ground and realise how things really work, not only how you think they should. **Perhaps it has been the first time in which I have really felt I was a teacher and everybody around me has considered that my work was worth the effort they did for me to implement it.**

[...] It helped us to improve our work and feel **we were not working alone** but that we had support from Melinda, Vicky and my peers. **We all know it was a big amount of work but I think it was worthy because we learnt a lot.** I think, we all were freaking out during the year because we have worked hard but I think we feel pretty good now and that it has become us better teachers.

In extract 58, she relates a sense of growth on a professional and personal level. She relates this development to the contributions of her social surroundings, especially to the people she was working with who valued her and made the effort to help her with her work. Events such as the ones analyzed in Episode 3 made her feel more confident about her work, (as she states in line 6). She describes the multimodal collaboration with multiple others, during which she had access to multiple sources and needs-based and individual focused character of feedback (see also extract 63 above), as a unique experience for her, compared to previous academic experiences involving task corrections. She describes having experienced a strong sense of belonging precisely because of the social others around her who, as she states, believed in her and made the effort to help her with her design and implementation of her teaching sequence (lines 3-5).

In paragraph 2 she explicitly relates the sense of security she felt in working with and counting on the backing of multiple others. She states that she felt that she “was not working alone” but with multiple others i.e., tutor, researcher, class and virtual peers, who were there to support her in every step of the way. This statement indexes a positive

socialization process into the community of teachers. She correlates the enhanced demands of the learning environment in which she participated with her achievement of becoming a “better teacher” and “grow[ing] as individual”.

Episode 3 in Chapter 9 analyzed how her virtual engagements helped Caterina resolve certain language issues that had to do with Caterina’s weaknesses in English. Clearly, this aspect of feedback, which, as also argued in the previous chapter, saved her from face-threatening situations in the classroom, correlates with the resulting security that Caterina herself acknowledges in extract 58. It should also be considered as important contribution in Caterina’s openness and understanding of dialogicality as beneficial to learning and improvement.

10.3.2. Process-based data

The process-oriented section of Episode 6 relates events that demonstrate her growing identification with and competence in contributing to the community of teachers on the basis of her own knowledge and experience.

EPISODE 6: DEVELOPING DIALOGIC AND RELATIONAL SKILLS

Episode 6 explores the contributions of her multimodal interactions to the above mentioned developments of reflection, critical thinking (extract 57) and skill in evaluating others’ practices by deploying teacher repertoire and making herself recognizable as a teacher.

EVENT 36: VIRTUAL INTERACTION (DECEMBER 2009)

Using learned reasoning processes to help virtual peer improve teaching design

In this virtual episode of cognition, Caterina is in the process of evaluating her peer's designs and give her support for improving her work and thus enacts the role of a teacher as a supporter of others' knowledge. In this role, Caterina contributes to others' learning through the exemplification of a sequenced and coherent planning of peer assessment activity, potentially reinforcing her current conceptualization and implementations of communicative teaching practices. Jean acknowledges her contributions several times, which had implications for Caterina's subsequent increase of confidence in both her planning skills and giving constructive feedback.

In the following extract, Caterina offers Jean targeted feedback on the issues of quality-quantity and reflection-oriented teaching, highlighting the absence of corrective feedback in group (peer assessment) and meaningful learning, which are pedagogical aspects previously discussed in classroom tutorials.

Extract 59a:

- | | | |
|----|----------------|--|
| 1 | Caterina: | I wanted to ask you one thing |
| 2 | Jean: | oh sure |
| 3 | Caterina: | the story and the non-fiction writing piece is the same task, or |
| 4 | | are they different one? |
| 5 | Jean: | oh they are different |
| 6 | | the story is personal to the student [...] |
| 7 | Caterina dice: | but which is the purpose of the leaf? |
| 8 | Jean | it's to brainstorm so they have an idea to work from |
| 9 | Caterina dice: | they will write the story related to the leaf? |
| 10 | Jean | oh, yes |
| 11 | Caterina dice: | ok ok! |
| 12 | | I think you could focus just in one writting piece |
| 13 | Jean | that way they can take the leaf home and think about it with |
| 14 | | their parents if they cannot think of one at school |
| 15 | Caterina dice: | that's a good point! |
| 16 | Jean | It's not a big writing piece |

17 it's just a picture or an idea that they want to write about\
18 Caterina dice: I know but you may not have time to correct it and show
19 them the errors, what is a good day [*sic*] to learn
20 Jean it's so they don't start writing about different things and focus on
21 one tradition in their story
22 Ahhh
23 that is true
24 Caterina dice: Maybe it's better to work on one piece but reflec ton it
25 Jean: yes, i think i might need to put in more time on the writing
26 portion and have more activities where students can reflect and
27 think about what they have written
28 Caterina: they could write the text and per groups correct the text all
29 together (ones will help others) and the 3rd day just draw
30 and write the text (clean) [...]

Specifically, in this instance, Caterina focuses her feedback on the organization of writing tasks that her partner, Jean, includes in her planning. First, she asks Jean for clarification on her exact writing plans. Jean had planned for two writing tasks, which Caterina evaluates as too much and advises her peer to focus on one task (line 12) in order to give time to correct it, which, as she also argues, would bear significant implications for ensuring students' learning (lines 18-19).

At this instance, Caterina proposes reflective teaching and learning, which she herself evaluates as a "great way to learn" (line 19). At the same time, this interaction suggests that, for Caterina, group work for correcting each other's work is becoming saturated as a routine resource and cognitive tool for organizing, sequencing and implementing teaching; and one that needs to be well thought of and planned in terms of time (lines 18-19; 49-52). Although Jean argues for the first writing task as scaffolding for students to carry out the second task, which as she states, is an important stage for learning (line 20-22), she acknowledges Caterina's argument about reflection (lines 20; 25-27). Then, she explicitly suggests group corrections as a way for the students to reflect about their writing (lines 28-

30). As she states, Jean can group students of different language proficiency levels to foster cooperative learning between the students and allow them to help each other out (lines 28-30).

Further along the discussion, Jean appears to first hesitate about adopting this pedagogical approach, because, as she says, she considers it beyond the students' current abilities at that age (lines 31-33) but then accepts Caterina's suggestion and considers creating a checklist, or type of a rubric for checking the spelling and supporting students in carrying out peer assessment (lines 35-36).

Encouraging peer to promote dialogic student-centred opportunities in the classroom

Extract 59b:

31 Jean: ahhh i likek the idea of the students working together
32 but... because of the young age, i wonder if they will
33 really be able to trust each other or really help each
34 other[...]
35 Jean: oh but maybe i can provide a checklist for the partners
36 to look at like capital letters and periods or spelling
37 Caterina: I think they can! I'm doing my practicum with 2nd
38 graders and they are able to help each other. You can do
39 the groups so you put together high level students and
40 lower level students, so ones can help each other
41 Jean: yes! it's a good idea!!ok!
42 Caterina: and after the groups correcting, you could propose
43 them to ask to the rest of the class the things they don't
44 know to ask
45 Jean: Ummm

Caterina remains a proponent of group work and reflection, operationalizing her learning and also metacognitive skills regarding these learning methods acquired from previous face to face and virtual sessions. Caterina creatively fuses previous 'voices' from the field i.e., previous experience and knowledge in applying peer corrections, in constructing arguments

and defending her views and opinions, and contributing to her peer's understanding (lines 37-38). In doing so, she implicitly evaluates her own practices as pedagogically legitimate. In the next extract, Caterina suggests grouping students of different language proficiency levels together to foster cooperative learning on two instances (lines 38-40). She assumes autonomy of thinking and echoes the concepts of multiple intelligences and teacher role in promoting dialogue and of group work to describe possibilities of such learning arrangement (lines 42-44).

Illustrating the role of the teacher in this dialogic scenario

Extract 59c:

46	Caterina:	to in this moment, you, as a teacher, can help them
47		with the rest of the class
48	Jean:	what do you mean?
49	Caterina:	when students finish correcting per groups, they can
50		show their texts to the rest of the class and do a final
51		correction (so you correct) but it's impossible, you would
52		need so many time [...]
53	Jean:	maybe as they finish they can correct and the ones that take
54		a little longer will be able to work with me like the early
55		finishers can work in partners to look over each other's work
56	Caterina:	yes! so they can start the correcting task as they finish
57	Jean:	and then while they are looking at each other's papers,
58		I can conference with the students that are having difficulties
59		oh Perfect
60	Caterina:	yes, it's good

In the latter phase, she emphasizes that the teacher intervenes to help the students (lines 46-47), that is, the teacher is facilitator of knowledge, not knowledge-transmitter. This learning scenario echoes a ZPD scenario involving social scaffolding by peers: first in peer interaction and second in teacher-student interaction (lines 39-40; 46-47).

Caterina's scaffolding becomes useful for Jean and allows room for her to construct her own ideas at several moments of this interaction e.g., "i might need to put in more time on the writing portion and have more activities where students can reflect and think about

what they have written” (lines 25-27); “oh but maybe i can provide a checklist for the partners to look at like capital letters and periods” (lines 35-36); and “maybe as they finish they can correct and the ones that take a little longer will be able to work with me” (lines 56-58).

Overall, in this extract, Caterina and Jean are mutually constructing their ZPD by providing feedback to each other. Caterina encourages Jean to consider the learning potential of fostering student-centred opportunities for reflection in the classroom. Jean’s initial arguments and scepticism about peer assessment in a young learners’ classroom create a setting for Caterina to ‘test’ her own views regarding the issue against different views. Caterina argues for and thus consolidates her own learning about dialogic learning; she skilfully constructs arguments to persuade her peer of the validity of her suggestions.

According to her final reflections, this experience reinforced her feeling of competence and confidence in making valid teaching decisions. Caterina ‘dialogises’ with her previous knowledge about and teaching experience with writing tasks, timing and task corrections in order to give constructive feedback to her peer. On the conceptual level, this fragment is evidence of authorship of concepts; it displays a self-regulated fusion of various fragments of conceptual knowledge discussed in the classroom into an authored discourse by Caterina. In doing so, she documents her move from other-regulation (by the tutor in the classroom to self-regulation of thought).

This development from other- to self-regulation of thinking regarding dialogic teaching, consisting in working with multiple others, is highlighted when this interaction is examined against previous interactions at the university. For instance, the following extract is taken from the very initial informal teaching practices at the school of Practicum III. In this

instance, the student-teachers recorded specific practices that posed concerns for them, and shared them with the class. Caterina talked about her own experience with a writing task, where she had applied teacher-led whole class spelling corrections with students copying the correct answers from the board, which, however, did not guarantee that students learned to spell the words correctly. Caterina found the need to explore alternative ways of correcting writing tasks to ensure that students really did learn to spell the vocabulary targeted and without necessarily being the main actor in the class. Instead Caterina sought strategies that allow opportunities for students to reflect on their own work and notice their own mistakes.

EVENT 37: CLASSROOM INTERACTIONS (OCTOBER 2009)

How do I go about correcting written tasks?

Extract 60a:

- 1 CAT [...] but then their spelling was...
- 2 UT so you did see incidences of misspelling
- 3 CAT yes but they are... they were...
- 4 UT is it really misspelling or just not copying correctly?
- 5 CAT they were copying
- 6 UT uh [sighs]
- 7 CAT but they were doing... so i thought... i don't know
- 8 UT so you're worried about the procedure of assessment of this particular exercise
- 9 CAT or if it's better uh... we did the activity altogether so i thought correcting
- 10 altogether was too... too heavy doing it again
- 11 UT what do you think? [...]
- 12 NAT well i think she did well because if you... first do all the activity together
- 13 em... see by one by one. you can see if they have written correctly or not if you
- 14 correct altogether you cannot see if they have written correctly
- 15 CAT yeah i thought that but i... didn't know if i was doing well or not [...]
- 16 UT what about peer assessment? there is a tendency to just think or it's the teacher
- 17 correcting or you're working as a whole group to do it together there are some
- 18 other interactions how could you set up peer assessment with this activity?
- 19 JAU make them spell on each other the words XXX
- 20 UT but she's interested in ho- in checking this worksheet
- 21 ANA so each student would give her a sheet of paper so there is a volunteer and
- 22 then everyone corrects how many
- 23 UT how would they how would they know if it's correct or not? you have...

The tutor used reflective questions to help her identify the problem/issue at hand in professional register “incidences of misspelling” and then “procedure of assessment” to isolate/locate on the problem (lines 4; 8). Caterina relates her finding that the students were not copying correctly from the board and her concern about whether this was an engaging way to learn spelling (lines 5; 9).

Natalia agrees with her decision of whole class corrections because, as she says, otherwise the teacher cannot know if the students have spelled correctly (lines 12-14). At this moment she does not seem to consider the potential of group work for learning and limits herself to getting the spelling corrected. Creating the conditions for the students to engage with their own and their classmates’ work and evaluate it was a later maturation stage in Natalia’s developmental process. In Natalia’s assessment of the situation at this point in time, the teacher poses as the expert/primary knower, responsible for giving the right answers rather than allowing for the students to negotiate them (as Natalia stated in section 1, teacher-led interaction dominated her classes). Caterina admits that this was also her thinking but at the same time made her feel worried about whether asking students to revise their writing from the board was an effective method for learning to spell. As she states “I didn’t know if I was doing well or not” (line 15), she was doubting about the validity of methods for correcting writing tasks, which may be interpreted as an intuitive understanding that having students to copy from the blackboard would not necessarily correlate with positive learning outcomes.

The tutor specifically remarks the teachers’ tendency to take control of the correction/

assessment process and disregard the fact that students' can also participate in this process. She suggests peer assessment as a bridging alternative between the two proposals, which would take the leading role off the teacher and hand it over to the students and prompts them to think about ways of organizing for such procedure (lines 16-18). Jaume proposes that the students spell the words to each other orally (line 19), which the tutor redirects to the writing level, which would suit the purposes of Caterina's practice since she was seeking to develop students' writing competence (line 20). Following up on this stream of thought, Anaïs proposes having a volunteer coming to the front of the class and share the draft which is again a whole group interaction led by the teacher checking the answers from the board (lines 21-22; 24).

The discussion continues with an explicit modelling of a peer assessment learning scenario by the tutor.

Extract 60b:

25 UT right a big sheet with the correct answers so you could have them either
26 as you said exchange papers which is quite normal or you could actually
27 have them in groups looking at each others' paper and discussing it like
28 you know three people oh no look you spelled that wrong see? it's up
29 there you because this class is in catalan so they could you know just
30 having a discussion about mistakes would not be that difficult for them
31 because it's their language supposedly right at least the majority so that
32 could be something you can do just put them in groups have them check
33 each other's paper you give them ten minutes to do it because otherwise
34 they just start talking about other things right? okay you got ten minutes get
35 into group ten minutes check each other's paper exchanging like that is
36 not as noisy [Anaïs laughing] as getting them into groups but it might lead
37 into discussion of errors you know which is always interesting as a sort of
38 metalinguistic type of analysis[...] we do need to start moving them
39 towards autonomy uh i i heard somewhere a very nice metaphor uh that
40 um the classroom management is a bit like a piece of like a pie yeah the pie
41 is good everybody likes this pie cake if you prefer but you don't eat
42 it all yourself you gotta slice it up and hand it out right/ you gotta share out
43 the cake so that means giving responsibility to students as well little by

44 little you start giving them piece of the pie piece of the responsibility pie
45 cos you know eat it all by yourself and sitting is no good either right?so i i
46 agree you need to start thinking about strategies but it takes training of the
47 students they won't do it very well first time[...]
48 CAT i think i did it this way because the teacher always revise that revise that
49 and then she corrects it corrects it
50 UT that's what the students are used to as well
51 CAT so i saw her XXX
52 UT you might meet resistance even..

The tutor models the organization of a peer assessment scenario in which learners work individually or in groups correcting each others' mistakes, referring to a big sheet that the teacher places in front of the class for the right answers (lines 28-49). Pedagogically, through this approach, the teacher could create conditions for the students to move from the passive task of copying to the active task of noticing and correcting their own and others' mistakes. In turn, this method reinforces dialogicality in the classroom through group work between multiple agents, resources, and learning arrangements i.e., student-student, teacher-students (Galton, Hargreaves, & Pell, 2009). Students participate in a self-led learning process by identifying useful structures and words that interest them and in turn engage in giving corrective feedback to each other on their own doubts and weak points. At the same time, the workload is passed on from the teacher to the students, who become responsible for the learning process and the teacher becomes the creator of conditions for negotiation of meaning through language and thus opportunities for language learning.

For the student-teachers, implementing this type of practices was "new" to the school context they were working in (line 50).

The tutor displays her cultural knowledge of traditional assessment practices in Catalan schools and points out that this type of assessment, apart from the teachers' tendency is

also deeply engrained in the students' minds and warns the student-teachers about the resistance that changing such 'habits' entails. She acknowledges the challenges involved in introducing 'innovative' assessment practices, she encourages them to proceed in incorporating them (lines 47-51).

The student-teachers became enthusiastic with the idea of learning-oriented and not performance-oriented per se, which was what the student-teachers' learner histories dictated and which they sought to overcome.

EVENT 38: CLASSROOM INTERACTION (NOVEMBER 2009)

Illustrating dialogic learning scenarios: The case of peer assessment

A few tutorials later (November 10, 2009), the tutor introduced the idea of "doing peer corrections" as a practical method to bridge the aforementioned 'dichotomy' that Anaïs had brought to light, contextualized in specific classroom context. The method of peer corrections constituted a new object, which the student-teachers needed to understand and integrate in their teaching practices as part of their socioconstructivist/dialogic education.

Extract 61a:

- 12 UT you can... there are ways... you can you can eliminate some of the
13 errors. for example one group writes their article and they have to give it
14 to another group to read to find the mistakes see if you can find any
15 mistakes help this group you don't say find mistakes you say okay help
16 this group do exchange and you can do that one time two times three
17 times and someone will see each other's mistakes
- 18 JAU yes but what happens when when one group one group has higher
19 level and the other one... which are given the article to correct
- 20 UT you can you can have mixed groups and you don't choose you say okay
21 take your paper and hand it to the hand it that's also a good way to learn
22 comprehension... take your papers and hand them two persons to the
23 right and they have to figure out two persons to the right correct okay
24 now take your paper and hand it three persons three people I can say
25 persons when it's individuals but you can't say persons again three
26 students to the left and then they have to think three [acts it out with
27 movements]. First time is a disaster yeah? I've done this with my

28 students it was fun seeing [demonstrates with movements] and then in
 29 the end all you have to do is okay does everybody have a sheet of paper
 30 that's not yours? do you have a paper to correct ... it's not a question of
 31 levels and if it's going once twice three times then you're gonna hit
 32 different levels i don't think that's gonna be a problem that's why i
 33 wouldn't do it once i'd do it twice even three times if you can. You could
 34 do this in one session one session dedicated to editing yeah? But it's a
 35 great moment for students to learn... to correct somebody else's
 36 work you'll find that out soon [laughing] [...]
 37 ANA a-ha [taking a note]
 38 UT they won't find them all they'll find some because there's different
 39 levels of knowledge and different recognition of different errors okay?
 40 so that'd be one way when you asked earlier how do I assess? well it's
 41 not really assessment but it is group work you know working together
 42 you know writing an article and then the next session is... correcting
 43 each other's work you know in the sense of being editors you know you
 44 get them in roles... okay you're an editor so they take turns with the idea
 45 that you know this is a draft and don't be ugly and... they'll find/ a lot of
 46 the mistakes themselves i think
 47 ADR and now you have peer assessment [laughing]
 48 UT and you have the peer assessment
 49 JAU Yeah
 50 UT not in the sense of putting the final mark but you have them assess
 51 someone's work 'cos inevitably you're gonna have somebody going [ahh]
 52 that's a peer assessment right there alright? don't don't you guys don't get
 53 so hang up on if there's a mistake somewhere by...

Specifically, the tutor suggests organizing the students in groups to correct their own mistakes and highlights specific positive aspects of this method introduced. As she relates, peer corrections is a method used to promote students' autonomy by transferring the responsibility of learning to the students themselves, transforming the assessment from a teacher-led practice into a student-centred one; the students would have the opportunity to work and learn collaboratively (lines 20-36). Through her discursive practices, the tutor provides the theoretical and practical tools for the student-teachers to work out the practical aspects of teaching with a strong emphasis on students' doing (active involvement).

Jaume remarked the different proficiency groups present in the classroom, and inquires about the implications of this reality for group work (lines 18-19). The tutor positions against ability-based grouping (Slavin, 1987; 1996). She supports the practice of roletaking

in the classroom, through which the students become actively involved in the process through distinct responsibilities (lines 44-46). This position operationalizes the interaction of multiple intelligences, distributed cognition (Gardner & Hatch, 1989; Hatch & Gardner, 1993; Scherer, 1999) and research findings positing the positive learning value of cooperation (see for example Slavin, 1996 for a discussion on the motivational, cognitive and developmental argumentations on the relationship between learning and cooperation). In developmental theories (Vygotsky, 1978; 1986), group work reinforces the processes of scaffolding and collaborative construction and operationalization of ZPD to advance others' learning. Research on peer reviewing has identified writing improvement for both reviewers i.e., students who provide corrective feedback and those who receive it (Diab, 2010; Lundsrtom & Baker, 2009; Jahin, 2012; Wakabayashi, 2013). What is more, in a context of high immigration, such as the Catalan case (Moore, 2011), the relevance of inclusive classroom practices becomes fundamental for ensuring dialogicality, equity, and cohesion (Braddock & Slavin, 1992).

Adrian relates this new content to Anaïs' previously expressed concern about possible methods of appropriate assessment (line 47). The tutor clarifies that peer assessment can only be a part of assessment and not account for final teacher assessment (lines 50-53).

At another point, Caterina brought up the issue of the power relations between school teachers and them as practicing teachers with no official professional status yet, which was another occasion for discussion and expert modelling of peer assessment.

Tutor encourages peer assessment scenarios

Extract 61b:

54 CAT: maybe in the school the teacher say she doesn't want it to publish it with
55 Mistakes

56 ANA: I don't think so...
57 UT: if that happens though you can still go through this process of them
58 finding as many mistakes as possible and then you as the teacher go
59 through the last drafts and correct it and you can use an overhead to
60 discuss the corrections you say okay look we have this sentence here and
61 you just take the mistakes out of context so that nobody knows who's
62 made the mistake you put it up on the board and you say wh- what's...
63 do you see
64 the problem here? and maybe as a whole class they see the problem
65 if they don't then you explain that cos that could be your final step
66 you know have your students write it goes to a different group and
67 this is going to take some sessions but this is very mo- you know
68 language-focused XX

Caterina appeared hesitant, influenced by power relationships in the classroom; she distinguishes her status as the student-teacher and the legitimate professional status of the school teacher (lines 54-55). At this instance, the tutor further encourages the student-teachers to implement this kind of process, suggesting peer assessment as a previous stage to teacher correction (lines 57-59); and emphasizes the “language-focused” component underlying this process, reminding the general frame of these methods within the CB/CLT paradigm (line 68).

The comparison of Caterina’s online chat with university tutorials also indicates a strong imitation of technical vocabulary and discursive patterns routinely used by the tutor in the classroom tutorials. Specifically, these patterns were part of the classroom’s functional language for giving constructive feedback. First, Caterina starts by asking for clarification through reflective questions e.g., “But which is the purpose of?”, (Extract 49a above). This reflective question was routinely asked by the tutor. The transfer of these patterns in online discourse reveals interesting observations in terms of how Caterina is learning to organize her own thinking around concepts through language and indicate that the virtual

environment and its demands empowered Caterina's developmental process in terms of professional and communicative skills.

A comparison of extracts 59a and 61a displayed above is also representative of this linguistic transfer. In Extract 61a the tutor suggests "peer corrections" as method to promote language learning through collaboration, reflection and role taking. She evaluates this method as a "great moment for students to learn" (line 35). On the online setting, Caterina evaluated her own version of peer corrections as a "good way to learn" (extract 59a, line 19).

In line 46 of extract 59c above, Caterina delegates the teacher responsibilities in the classroom), explicitly echoing the specific roles of the social actors in the classroom that she has learned. To do that, she again borrows linguistic patterns for the classroom, then articulated by the tutor (see extract 61b, line 58 above; and also Chapter 9, extract 4b line 80).

Another discursive feature that Caterina imitates consists in language for giving positive reinforcement e.g., "that's a good point" (tutor's discourse in extract 62 below).

The classroom repertoire emphasized the "two [good points] for one [negative point]" as a face-saving technique for giving feedback (see also Natalia's discursive activity when giving feedback in Chapter 9). In this extract, Caterina adopts this technique and 'chunks' of language, put forward by the tutor to mitigate the effect of the negative feedback. This conclusion can be further substantiated by juxtaposing the above extract with the extracts below.

EVENT 39: CLASSROOM INTERACTION (OCTOBER 2009)

Modelling teacher thinking and speaking

Extract 62: (20 October 2009)

- 1 UT uh-hm right so that's that is a very important point there that if a teacher is
2 watching this that can indicate too because sometimes you don't know if
3 they're understand it or not but the non-verbal movements here are
4 indicating to you that they have understood that as a cell their their
5 job is to keep the virus out and it was these two doing it without the
6 teacher telling them to do it yeah?so that was a very good point

On these previous occasions, the tutor's discourse was the mediating tool for noticing and instigating reflection on important components of teaching e.g., meaningful instruction, the primacy of quality over quantity and students' involvement/active engagement/students doing things as fundamental framework for any learning activity; teacher's role in guiding and the learning process. In the presence of an expert teacher, Caterina, as a novice teacher assumed an inquiring and receptive role. On the network-mediated setting, Caterina actively endorses social roletaking (Mead, 1934; see also Reiman, 1999). She takes the social role of the professional teacher which she effectively communicates through technical language and puts in practice her new understandings on how dialogic student-centred evaluation activities should be organized effectively. Specifically, she reconstructs and transforms previously other-mediated and other-regulated ideas, arguments, and teacher discourse into a self-regulated clearly-articulated teacher thinking. In other words, Caterina creatively imitates i.e., fuses together previous voices i.e., tutor's and classmates perspectives, opposing ideas she had received from the classroom and also experienced during her initial classroom teachings regarding decentralized formative assessment.

A review of the literature on imitation emphasizes that it is a central stage in the process of

internalization and a potential transformative process (Lantolf & Thorne, 2006: 179). It is not parroting behaviour but an agentic process through which the learner selects, reduces, expands and repeats aspects of social models for their own purposes (ibid.). Using Lantolf and Thorne's explanation it can be said that Caterina engages in goal-oriented imitation of tutor's discourse; she "externalizes socially-acquired and socially-shared symbols" (ibid: 174) in order to contribute to her community through recognizable social action (Lantolf & Thorne, 2006); to wit legitimate teacher thinking and discourse. On these latter ideas of externalizing knowledge and contributing to other's knowledge and a knowledge-producing community (Edwards, in press), it can be argued that the network-based interactions become a theorizing opportunity for student-teachers to reason on their learning experiences, consciously defend or dismiss them and "to project knowledge on the public forum, and become contributors to the substance and processes of their professional discourse communities" (Johnson, 2000: 5), as basis for subsequent professional practice.

EVENT 40: SCHOOL IMPLEMENTATION (JANUARY-FEBRUARY 2010)

Application of dialogic learning: Self-regulating concept and process of assessment

Following these interactions, Caterina reorganized her teaching plans to include self- and peer activities to promote students' reflection on their own work. She implements various types of peer corrections from multiple others i.e., teacher, classroom peers, and individuals. This outcome seems to correlate with her own evaluation of experience, as she acknowledged in extracts 57 and 58 in section 10.3.1. The textual productions of her planning read as follows.

Extract 63:

Assessment procedures

Teachers' assessment

Teacher does an initial, continuous and final assessment. As observation is quite tricky teacher should use different strategies to assess students. I suggest teacher uses a rubric for an initial evaluation (filled in in colour blue) and then another rubric for final evaluation (filled in in colour red); that way the teacher can notice students' progression. To do a continuous evaluation teacher should observe, help and guide students during the different lessons.

Next day after the exam, teacher should write brief notes to students giving feedback about their work. The notes should be on their tables when they arrive to class. It would be interesting if the notes are addressed to each student, I mean they have the name of each student.

The rubrics should be filled in when the teacher realizes a student reached an objective; rubrics should be filled in when there are evidences of language learning. If there are not evidences teacher should help those students and fill the rubric in when all sessions finish. The initial assessment rubric should be filled in after the 2 first sessions.

Peer assessment

Peer assessment is used in Mr. Potato activity. The activity is done in pairs and a student of each peer assesses his/her partner. Teacher cannot observe all the students in the computers so peer assessment is a good way to check if they recognize the vocabulary orally. Peer assessment is useful to see if students (both the student playing and the student assessing) recognize and understand the vocabulary.

Self-assessment

Teacher provides students two different self-assessment worksheets: an initial self-assessment (filled in in colour blue) and a final self-assessment (filled in in colour red), to see the progression. Both should be similar to the rubrics teacher has so students can observe and see how they are going to be evaluated.

It is essential to explain to students that self-assessment is important and that it is going to be taken into account in their evaluation. Furthermore, the self-assessment rubric should be filled in altogether. The teacher could read each criterion, explain the meaning of each requisite and give students time to answer. Once students get trained in self-assessment and rubrics teacher would let parents see the rubrics.

Caterina includes three types of assessment; teacher- peer- and self-assessment, for which she prepares rubrics (not displayed here), thus giving the students the opportunity to actively participate in their learning process by evaluating their progress against their learning objectives. In this extract, she describes her role and responsibilities as the teacher in the process of assessment: (1) use different strategies to observe the learning process, take notes, and give feedback to students to scaffold improvement; and (2) guide the students during peer and self-assessment and “train them” in evaluating their own progress.

In extract 64, she explains the rationale of the incorporation of other types of evaluation she used to complement teacher assessment.

Extract 64:

Rationale of changes

This session is an extra one. The activities are the same I planned but I rewrite the sequence. I did not know how to check and assess students doing the Mr. Potato but then I decided to take profit of peer assessment, since it helps students to get “involved in their learning and evaluation process as learning participants” (135:2007, Maíz Arévalo, C.). Furthermore, peer assessment ‘develop in students the ability to work cooperatively, to be critical of others’ work and receive critical appraisals of, and feedback on, their own work’ (2002, Griffith University) and, in my opinion, developing those competences is essential by early stages. Students are used to think just the teacher can help them on their learning process and peer assessment may help them realize they are wrong.

The phrases “developing those [cooperation] competences is essential by early stages”, “students are used to think the teacher can help them on their learning process”, “peer assessment may help them realize they are wrong”, “students are used to think just the teacher can help them” again reveal an intertextuality of voices (Bakhtin, 1986; Wortham, 2001) with her classroom and virtual meetings. In this extract, peer corrections and student-centred evaluations of own and others’ work become internalized concepts authored in Caterina’s own discourse. Her experiences, as displayed above seemed to correlate with her planning for group work because “others are able to see mistakes that you are not able to see” (extract 7).

As briefly discussed earlier, ethnographic background data depict Caterina as a rather silent but receptive participant in the classroom tutorials. This conclusion is based on notes from the field, overall amount of language production during the sessions, and audiovisual data, which record Caterina engaged in a constant note-taking. This fact seemed to also accord with her insecurity about her language proficiency, which she documented at several times

in her chat conversations and wiki. In her chats, she sought constant reinforcement by her peer in terms of language.

Similar to Natalia and Anaïs in Episodes 4 and 5 respectively, the virtual activity had both affective and cognitive relevance for Caterina. On the affective level, the virtual medium became an opportunity for Caterina to move beyond her shyness and barriers posed by her perceived limited language proficiency and argue for her understandings of legitimate – and effective teaching strategies, based on her school experience with communication-based language learning scenarios. The cognitive relevance of such instances lies in the opportunity provided by the virtual medium for Caterina to consolidate her conceptualization of communication-based FL instruction and the role of the teacher in this instructional paradigm.

The analysis provides empirical evidence that Caterina was revisiting her understandings of concepts that she came across in the classroom, and which, as she states, were further appropriated through classroom implementation (prior to the virtual meeting). Caterina used these understandings in other contexts (peers' designs) to further theorize on her own experience; take ownership of the content and discourse delivery and communication patterns such as questioning, listening to others' arguments, give positive reinforcement and argumentation, and take part in dialogic and argumentative discourse. The data demonstrates that Caterina assumed autonomy, used teacher linguistic repertoire and drew from her own experience to construct valid claims, cohesive arguments and reasons and thus hold herself accountable for decision-making regarding legitimate assessment for learning practices. These events can thus be interpreted as significant developmental incidences for Caterina in terms of evolving metacognition, based on concepts learned and

lived during classroom experiences, along with mastery of discipline-specific discourse, and reasoning and communication skills. All of this, in turn, allows her to align herself with professional teachers.

In sociocultural terms, these forms of interactional activity taking place online illustrate creative attempts at developing mastery of the psychological tools (higher order skills) i.e., language for thinking and reasoning about assessment. Also, they reflect a process of internalization through externalization i.e., a transfer of originally socially-distributed symbols that were internally fused with personal meanings, which are then brought back to the social plane to create meaning for her peers (J.P. Lantolf & Thorne, 2006). Concretely, this outcome was prompted and facilitated by the demands of the virtual environment, interaction with other student-teachers from across the globe, who were originally perceived as more expert in teaching, leading to the inherent need to keep up with these assumed standards. The asynchronous medium of communication and textual form of feedback exchange (which took place at the beginning of the draft designs) allowed the student-teachers time to reflect and revisit previously discussed concepts and a meaningful context for self-initiated application of relevant concepts. Further dialogic discussion e.g. synchronous chats generated affordances for goal-oriented imitation, as a mediating process to further conceptual maturation, communicative skill development in contributing to positive collective work in a pragmatic context, and confidence building resulting from perceived ability to effectively position themselves in regards to specific aspects of academic and professional life. Following neo-Vygotskian rationale on the learning potential of dialogic engagements for teachers' learning, it can be argued that the demands of the online setting afforded opportunities for Caterina to better understand and

consolidate the “passive aspects of experience” and created a “space of reasons” about her own practices (Derry, 2000; Edwards, in press). Edwards posits that the conscious deployment of concepts and meanings allows access to higher order thinking and contributes to a wider form of professionalism. Specifically, it expands the effect and meaning of the experience from a local limited meaning of the classroom, making it public and accessible to contestation from others. In turn, the conscious articulation of experience in public reinforces the conceptualization of these experiences (Derry, 2000).

Summary

Summarizing, Episode 6 related ways in which the blended environment generated opportunities for Caterina to purposefully enact the knowledge she acquired from classroom dialogue, emphasizing her own role in this dialogic framework. Sequences of events described in this episode, in relation to the ones exemplified in Episode 3 contributed to concept formation, namely the understanding of learning as dialogic emerging through own experience. Caterina eventually applied her understandings of the interrelationship between dialogue and learning into her own teaching.

Episodes 4-6 exemplified the enactment of dialogic learning across modes, during which partners moved back and forth between roles (Mead, 1934), that is learner and mentor/tutor, to help each other in their particular endeavours and live up to the demands of the professional environment. Natalia, Anaïs and Caterina recycled internalized knowledge to contribute to their virtual peers’ improvement in teaching and cognitive development. Such visibly cognitively and emotionally-loaded processes culminated in self-confidence, evidence of which is to be found in the student-teachers’ growing ability to receive, ask for

and accept feedback without feeling attacked. It was also found that student-teachers transferred and applied their understandings from these multimodal interactions into their own teaching during school placement. Specifically, they operationalized them in dialogic practices such as group work, peer corrections and assessment.

On the whole, the findings displayed in this chapter demonstrate the affordances of carefully integrated telecollaboration for creating pragmatic spaces for internalization and externalization of previous knowledge to the end of creating new artefacts and spaces for efficiently engaging in professional practices (Van Lier, 2000, 2011; Edwards, in press; Cunningham & Vyatkina, 2012) Specifically, the interaction afforded opportunities design and produce didactic material, participate in autonomous decision-making and apply dialogic practices to their own teaching. Edwards' (in press) empirical findings demonstrate that student-teachers are often found with an "impoverished version of the rough ground, working only with locally situated understandings". She argues that student-teachers need to be provided with the "chance of engagement with powerful pedagogic concepts" (ibid.) beyond the local level of the classroom in order to reflect on and develop consciousness of their practices. This chapter related instances where the online environment facilitated such processes by giving a context for roletaking and social and cognitive development (Mead, 1934; see Reiman, 1999 for the potential of roletaking in fostering reflection in teacher education). In these interactions the student-teachers had to assume the role of the helper of others thereby deploying their existing knowledge and experience. For instance, the events demonstrate how the online setting provided the opportunity for Caterina to consolidate the passive aspects of her classroom experience by discussing them on the public forum. On the whole, Natalia, Anaïs and Caterina, in their

respective meetings reflected on, articulated, demonstrated understanding and reasoned on their own teaching experience; which in turn reinforced their sense of self as teachers, all of which serves as a basis for future selection of actions in the classroom (ibid., Johnson, 2000).

These complementary, reinforcing and expansive relationships between face to face and virtual interactions underlying school performance and practice are schematically illustrated in Figure 10 below:

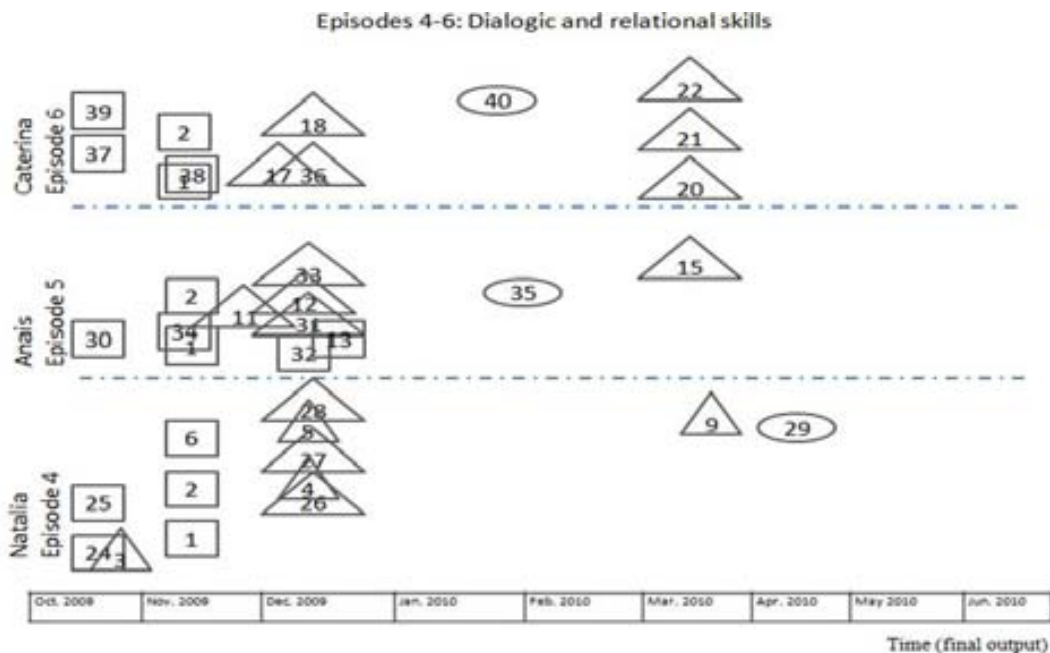


Figure 10: Timeline of events in Episodes 4-6

- Events represented in Fig. 10**
- Episode 4 (Natalia): Developing dialogic and relational skills**
- Event 24: CI (Oct 2009) - Fear of feedback: Support from tutor**
 - Event 25: CI (Oct 2009) - Getting accustomed to the activity of feedback**
 - Event 26: VI (Dec 2009) - Online encouragement for dialogue for learning**
 - Event 27: VI (Dec 2009) - Acknowledgement of learning through dialogue with virtual others**
 - Event 28: VI (Dec 2009) - Peer-tutoring: Bringing in concepts from the classroom to improve collective experience and develop own voice**
 - Event 29: SI (Apr 2010) - Transfer: Applying dialogue to classroom teaching**
- Episode 5 (Anaïs): Developing dialogic and relational skills**
- Event 30: CI (Oct 2009) - Setting the grounds for dialogic teaching: Assessment for teachers, students, or both?**
 - Event 31: VI (Dec 2009) - Concretizing assessment: Dealing with the practicalities**
 - Event 32: CI (Dec 2009) - Re-take/scaffolding of student-centered assessment**
 - Event 33: VI (Dec 2009) - E-mentoring: Contributing to others' knowledge: on the premises of CB/CL instruction**
- Episode 6 (Caterina): Developing dialogic and relational skills**
- Event 34: CI (Nov 2009) - Tutor-scaffolding: Focus on meaning or form?**
 - Event 35: SI (Jan-Feb 2010) - Transfer: Application of dialogic learning in classroom practice**
 - Event 18: VI (Dec 2009) - Peer scaffolding prompting reflection on language to be taught**
 - Event 20: VI (Mar 2010) - I'll write and you can check the English**
 - Event 36: VI (Dec 2009) - Using learned reasoning processes to help virtual peer improve teaching design**
 - Event 37: CI (Oct 2009) - How do I go about correcting written tasks?**
 - Event 38: CI (Nov 2009) - Illustrating dialogic learning scenarios: The case of peer assessment**
 - Event 39: CI (Oct 2009) - Modeling teacher thinking and speaking**
 - Event 40: SI (Jan-Feb 2010) - Application of dialogic learning: Self-regulating concept and process of assessment**
- Key:**
- Classroom Interaction (CI)
 - △ Virtual interaction (VI)
 - School Implementation (SI)

11. Technology and learning: Digital and integrated skills

Overview

The curriculum requires future teachers to be able to incorporate Information and Communication Technologies (ICT) to promote learning, communication and sharing in educational contexts. Increasing educational discourse continuously imposes new contexts of learning and enhances demands for (future) teachers to be able to function efficiently in an era of exponential advent of network technology.

This chapter displays empirical evidence of the student-teachers' development of digital, conceptual and integrated skills and demonstrates their gradual openness and willingness to apply technology-integrated pedagogy in future teaching. The purpose of this chapter is not to relate an analysis of human-computer interaction; rather it is to trace events related to the student-teachers' conceptual development and understandings of technology integration (including telecollaboration) in pedagogical practice that added force to the experiential model of network-based learning in which the student-teachers were immersed.

This line of development, labelled "Technology and Learning" was selected as a salient theme of analysis appearing 101 times out of 649 references.

11.1. Natalia's case

11.1.1. Product-based data

For Natalia, developing digital literacy and software specific orientation i.e., learning about and learning to manage technology for personal and teaching purposes added to her cognitive and emotional stability in regards to teaching VYLL.

Extract 65 is taken from her wiki reflections at the end of the year.

Extract 65:

8. A good teacher knows how to integrate technologies into his teaching. He can:

- **Adapt teacher practice for presenting classroom activities and management of tasks so that these practices integrate the use of technology as an everyday part of the classroom interaction (1)**

This year I have learnt a lot of new technologies. On the one hand, in the Practicum sessions, I have had the opportunity to get in touch with lots of resources as voicethread, wiki, zoho, google docs and second life. This has given me lots of ideas in order to use these resources in class. I think the one I am going to use more is the voicethread. On the other hand, observing my teachers in school have helped me to see the technology as a part of the daily interaction. What they use every day is the digital board, which I have seen being used by the English teacher and the tutor. They take profit of it every day.

Moreover, I have had the opportunity of using this tool in my teaching sequence and some of the activities I have made in the school. This has been a very challenging and profit experience for me.

She evaluates the opportunity to get in touch and engage with multiple “new” technologies to carry out different tasks. She itemizes the technology she has learned to use as the basis for future implementation, distinguishing between technologies she has used and learned in the practicum course i.e., Voicethread, wiki, Zoho, Google docs and Second Life, and the digital board. She highlights that this exposure was conducive to her learning and development as a user of technology. She evaluates the different tools in relation to her

context of instruction, as she understands it at that moment, classifying the digital interactive board as the technology typically used in her school context and “part of the daily interaction”. This understanding of technology as part of the ‘daily interaction’ indicates another component of her transformation regarding legitimate classroom practices. She seems to change her understanding of language teaching from a teacher-fronted approach, as she stated above to a student-centred approach, in which she creates conditions for communication and competence development. She recognizes that technology provides a valid resource for this approach. The complementarities of her virtual experience and school practices with technology seem to function at both an information and transformation level (Van Lier, 2004). As Natalia states, her participation and engagement with technologies provided useful information for her future teaching i.e., ways of using technologies in the classroom. At the same time, it provided affordances for her to develop a conceptual understanding of computer-mediated learning or as (Barberà, Torras, & Guasch, 2011) puts it. She singles out Voicethread as the technology she feels she came to master and the tool she found to be most relevant to her purposes of teaching and learning; on a transformation level, she documents her willingness to expand the conventional use of technologies at the school by introducing technology in her future teaching.

Technological skills at the user level engendered confidence for Natalia, who initially positioned herself as technophobe. For instance, following the activity of designing her podcast and implementing it in the classroom, Natalia indicated an epistemological understanding of technology integrated pedagogy. Extract 66 below illustrates how Natalia’s perception of the role and use of technology (specifically podcast technology) in pedagogical practice evolved over time.

Extract 66:

The activity that we planned was aimed to work on improving the use of communicative events in the classroom. We agree with CLT since “*activities that involve real communication promote learning and since activities in which language is used for carrying out meaningful tasks promote learning*” (1999, SIL International) and that was our goal as teachers. With this objective in mind, I planned the podcast as a tool to communicate with the caterpillar itself.

The goal was that all the class could make the questions to the caterpillar and it repeated all the answers (Yes I do/ No I don't) in order to drill the structures to pupils at the same time they reviewed the food vocabulary. This drilling would help them to do the next activity (put into practice the vocabulary and sentences drilled). We chose a common topic because we “*are very interested in the needs and desires of our learners as well as the connection between the language as it is taught in their class and as it used outside the classroom*” (2010, Wikipedia).

The methodology thought to do the activity was the *scaffolding* theory. We were going to use the knowledge pupils already had (of the story, the food and structures) and go a little beyond. First, let them refresh the words (food vocabulary) after watching the video. Then, using those words and introducing a new structure in a context (to ask the caterpillar). Finally, they were going to use the knowledge drilled to a real purpose: tasting fruits. Being the main character and experimenting would drive to a meaningful learning, which we thought they were going to learn better and whereas they get fun.

In extract 66, Natalia recounts how she integrated podcast technology for teaching food vocabulary. She and her virtual peers contextualized technology in their approach to teach language through “real communicative events in the classroom” (paragraph 1) and the students’ needs to learn language with real-world relevance: food (paragraph 2). In this scenario, she used the technology for dual purposes: (1) to review and drill the structures as an initial stage to subsequent production; (2) to promote interaction with the caterpillar (and thus language production). She introduced a figure (the caterpillar), resources outside of the classroom, to enhance students’ motivation. In her post-reflection of planning, she related this tool to the pedagogy of scaffolding (paragraph 3); according to her understanding of this pedagogy, she used the podcast to elicit students’ previous knowledge of the language/structures and then build on it; she taught more vocabulary and generated opportunities for using this language in the real context of communication with the

caterpillar. In addition to the podcast as real-world artefact, she brought in fruits, which she allowed students to taste, thus creating an analogy with real life.

11.1.2. Process-based data

This section recounts instances from Natalia's trajectory with technology and illustrates the process underlying the outcomes analyzed in section 11.1.1. Accordingly, Episode 7 traces Natalia's experience with technology from the beginning of the practicum, when she was first introduced to the idea of engaging with network-based learning to the end of the year, when she related an epistemological understanding of technology-integrated pedagogy through model teaching and experiential learning.

EPISODE 7: DEVELOPING DIGITAL AND INTEGRATED SKILLS

EVENT 41: CLASSROOM INTERACTION (OCTOBER 2009)

Fear at the idea of technology and learning

Extract 67 conveys the student-teachers' 'panicked' reactions to the idea of technology integration, specifically the use of telecollaboration for academic purposes in the second tutorial session; and thus highlights the impact of the student-teachers' transformation regarding technology.

Extract 67:

- | | | |
|---|------|---|
| 1 | JAU: | Zoho oh Zoho yes |
| 2 | ANA: | But we haven't used Zoho before for these things |
| 3 | UT: | you will be using zoho (laughing) you'll be using zoho for the...
the exchange with your peers [...] I've used them both [...] |
| 4 | UT: | I will teach you how to do it [...] |
| 5 | NAT: | Is it easy? |
| 6 | ANA: | yes okay |
| 7 | MAR: | Okay |

As Extract 67 illustrates, technology-enhanced pedagogy was initially ‘uncharted waters’ for the student-teachers. They had no experience in educational uses of technology, and seemed puzzled and worried about its educational potential for cognitive development, especially in the case of young learners. Anaïs pointed out that Zoho is ‘unknown’ technology for all of them (line 2). This appears to create tension; on the one hand because of their lack of technological know-how and on the other hand because, in this context, they were required to use and efficiently implement this unknown tool to carry out an assessed and equally new and unfamiliar task: design a teaching sequence. Natalia seems to share Anaïs’ concern and seeks reassurance on whether the technology proposed was easy (line 5). The tutor’s encouragement to use technology and her promise to support this effort appeared to be an important factor in these student-teachers’ development in regards to technology (line 4; 6-7).

Natalia received and gave feedback in a multimodal set of interactions, as indicated in Episodes 1 and 3. Her practical experience with technology (Voicethread, Zoho, MSN and Skype), her perception of her growing ability to use technology and acknowledgment of the feedback she got as beneficial for her learning was a very important step in calming her fears about participation in technology-mediated settings.

EVENT 42: CLASSROOM INTERACTION (DECEMBER 2009)

Tutor calms more fears related to technology

The following extract comes from a discussion at the university, during which the class discussed the format of the final portfolio. The issue of technology reappeared when the tutor proposed an e-portfolio (in wiki format) over a copy of Word document in a CD-ROM

version which was the usual format required for this task. On this account, Natalia re-documents her 'technophobia'.

Extract 68:

- 1 NAT how you can see the... how you can see the wiki?
2 UT same way that you do with zoho document you just share it...
3 JAU Yeah
4 NAT share it
5 UT but you can also create your own wiki in zoho document just doing links to the
6 next page. I've done that as well whatever you feel more comfortable with.
7 JAU no that's okay if there is an application we can count on/
8 UT do you want to have a look at it and then we decide?

9 NAT I'm always afraid of new technologies
10 JAU [laughing]
11 UT uh... don't be afraid of it it doesn't bite you are not gonna tear your computer
12 up [laughing] you gotta you gotta get over that fear. I used to have that fear
13 i'm gonna tear my computer up you know computer survives huh? you may

14 have a few days when you're like [angry] you get it all up there and it

15 disappears right?but you learn and once you learn it's just pretty much the
16 same the same...steps in just about all the platforms nowadays it's the same idea
17 NAT it's good to know more more things about you know the powerpoint and
18 voicethread and zoho..

In extract 68, Natalia requires practical information on how a wiki can be accessed and visualized (line 1). The tutor mentions the Zoho document as a now familiar tool for the student-teachers since they had already used it to share their teaching drafts with their UIUC partners and receive feedback from them in asynchronously, which Natalia recognizes (line 2-4). Since Zoho is a tool that can be used for several final outputs, the tutor introduces the wiki function as an alternative and additional function for them to explore (lines 5-6). The tutor reassures them that she has experience with both functions and will be able to help them and at the same time assigns the choice of tool to use to them (line 6). Jaume accepts

with the condition that this technology will be reliable (line 7). Natalia states that no matter what technology they will use, she will feel afraid, thus revealing her lack of expertise with technology in general (line 9). In lines 11-16, the tutor picks up on Natalia's technophobia and encourages them to use technology despite their fears. The tutor poses herself as an example of a prior technophobe who is now experienced and expert in technologies. Specifically, she relates that she herself had to learn about and acquire the know-how to use technology. Natalia then acknowledges the beneficial aspect of acquiring digital skills with multiple technologies (lines 17-18).

Articulating and discussing their needs to become competent in technology in group, the student-teachers came to conceptualize and appreciate the learning environment as a framework of possibilities for reaching their objectives. Their experiential learning about teaching through technology (Episodes 1-6) increased their motivation in gaining from this framework of learning that combined higher-level tools and interaction with people of varying expertise. The group later decided on Zoho wiki as the format of their final portfolio.

In the second semester, the use of Second Life (SL) as the platform for carrying out the podcast activity produced further fears. SL was, for most of them, a very demanding tool and the interaction with this demanding technology eventually sufficed to confidence building. In Natalia's case, it served her as a "new and interesting knowledge" with high demands which she could carry out, even minimally due to computer deficiency (the virtual activity was being carried out from home and depended on the student-teachers' technological resources e.g., computer, appropriate software).

However, rather than analyzing the acquisition of competences for full management of this technology, the cognitive focus of the following discussion - and priority of teacher education, is on learning ways of integrating technology in pedagogical practice.

EVENT 43: VIRTUAL INTERACTION (MARCH 2010)

Operationalizing known concepts to design technology-integrated pedagogy

On the occasion outlined in event 43, Natalia displays authorship of ideas related to what would be an appropriate setting for young learners to revise and produce language related to food. She begins with concrete thinking about what she wants to teach i.e., fruit vocabulary and the language structure using the verb 'like'. She then links the podcast materials that the group has to make together and the opportunity to create an authentic communicative atmosphere around this teaching.

Extract 68: Natalia & Imy (textchat ID: Work Work)

1	Natalia dice:	so we have to do a podcast to use it in a lesson plan of
2		one hour and we will have to think the previous activities,
3		the final activities and so on. They are now doing a story,
4		perhaps we could do a video
5		of the story or this is very difficult?
6	WorkWorkW ork dice:	the shorter the better
7	Natalia dice:	we could use the language that is being learnt in that book
8		to do some communicative activity
9		the book is about a caterpillar you know that book?
10	Work Work Work dice:	the very hungry caterpillar?
11		Sure
12	Natalia dice:	Yes
13	Work Work Work dice:	http://www.youtube.com/watch?v=HpISHA8Fs4w
14		so what vocabulary are you teaching with that book?
15	Natalia dice:	so perhaps we could so some images of the caterpillar
16		eating the food and some clicks with voice saying DO
17		YOU LIKE APPLES?
18		and children answering YES I DO or NO I DONT
19	Work Work Work dice:	hmmm sounds good

20 so the phrase you're teaching is "Do you like?"
 21 Natalia dice: no, but we can introduce it and review the vocabulary of
 22 the story sausage, cake, different fruits..
 23 during the story they work on language as Im very
 24 hungry do you think is too simple? [...]
 25 Work Work no, from what I remember of ITalian students they
 Work dice:
 26 could absorb about one phrase an hour
 27 the vocabulary is cute!
 28 Natalia dice: it will be as a powerpoint with images and sound
 29 Work Work do your students have a computer?
 Work dice:
 30 it might be cool for them to click through it
 31 Natalia dice: yeah!

Specifically, Natalia uses this second occasion for planning a unit to further explore the idea of language teaching which is embedded in the school content. She also brings up focuses on the instructional content needed (lines 1-5) and highlights the connection to students' previous knowledge (indicating that the caterpillar character is a familiar character to the children in a book form, lines 7-9). Imy finds the digital version of this character and shares the youtube link with Natalia (line 13). Natalia suggests that the format of the podcast could be pictures of the caterpillar eating fruit, then the narrator asks the children questions about their likes and dislikes of food. In this sense, technology would authenticate the setting of the instruction by bringing in authentic tools and a more interactive form of the main book character. Imy agrees to Natalia's suggestions (lines 15-19).

The two partners move on to discuss the content of instruction i.e., the language to be taught. Natalia suggests vocabulary and fixed phrases related to food. She consults her peer about the cognitive complexity for this age group of students. Imy relates her own experience with teaching very young Italian learners and their learning pace (lines 25-26) and indicates that she thinks Natalia's thoughts on the matter are appropriate. Both peers agree on maintaining a small amount of content given the age group of students targeted.

Imy also proposes engaging students with technology by letting them click on the video and thus giving them a more active role in the process and Natalia agrees with the idea (lines 29-31).

This interaction also bears connections with Natalia's first semester planning of content, when she needed reinforcement on the quantity of teaching content (see Episode 1). (At the time, it was recommended that she limit the amount of planned content). At this stage in her development, Natalia reveals a change in her understandings about VYLLs. She has moved from the abstract to more specific objectives -proposing a simple phrase and vocabulary content to be worked on in this activity, to be achieved with technology.

EVENT 44: VIRTUAL INTERACTION (MARCH 2010)

Creating technology for the classroom

Extract 69:

In order to organise ourselves, Imy began to look for pictures about the vocabulary I asked her (related to the context of P5). On the other hand, I did the script of the podcast (attached below), writing what the caterpillar had to say and explaining in detail each slide of the podcast. I also recorded myself saying the sentences of the caterpillar. With it, Imy created the final podcast. I have to admit that I was very surprised with the result, as I liked it pretty much. If we had had more time, I would have done a more elaborated podcast, as a video of the caterpillar eating through the food. However, I am pretty satisfied with the results.

In her final reflections, Natalia reports on her engagement with technology. As she states, she participated in the creation of the podcast by recording the voice and words of the caterpillar. At this moment, she becomes a designer of ICT materials for the classroom and expresses her willingness for more engagement, if she had more time.

This positive and successful engagement with communication materials for the classroom and resulting satisfaction with class implementation contributed to her confidence and motivation for experimenting with technology in the future (extract 65 above).

11.2. Anaïs' case

11.2.1. Product-oriented data

This section sketches out Anaïs' development of digital, conceptual and integrated skills. It relates experiences of how she transferred her understandings of dialogic learning into her own teaching, incorporating network-based pedagogy in simulated activities presented at the academic level and an openness to future technology-integrated pedagogy.

Anaïs, through her experience with telecollaboration, developed a new approach to promoting social interaction in the classroom, directly related to her participation in the online exchange. From her personal experience, Anaïs associated the opportunities she had experienced first-hand with opportunities she could use in her own teaching. She made connections between university experiences and the conceptual whole of the communicative/competency-based approach to (language) teaching and came to include telecollaboration in some of her assignments. Her experience transformed her understanding of the concepts of real/authentic communication for language learning and student-centred collaborative interaction-based instruction.

First, Anaïs enacted her emerging understandings of group work and technology-mediated learning either in simulated activities (during the microteaching where she used telecollaboration) and actual practice (implementation of teaching sequence and podcast in the classroom).

The following extract reflects the culmination point of Anaïs' learning process towards the end of the year. It is taken from Anaïs' report from her microteaching¹⁹ class, and

¹⁹ Microteaching is a training technique aiming at giving student-teachers confidence, support, and feedback by letting them try out among colleagues sample snapshots of what they plan to do with their students. It serves to receive feedback on the effectiveness of teaching strategies by their peers who may act as students in

documents Anaïs' pedagogical and epistemological understandings of language learning and teaching. These understandings are directly related to her participation in the online exchange, which she associated with their own teaching. She made connections between her learning experience e.g., telecollaboration and the conceptual whole of the CB/CL approach to teaching.

Extract 70:

Our micro-teaching session was based on the CLT approach and was done using, firstly a VoiceThread presentation and then group work - cooperative learning. To do this, we started the session contextualizing the project and presenting the final product students were expected to do further on: a VoiceThread presentation introducing themselves to Australian students. In my eyes, the introduction and first part of the session were precise, concise and to the point since students knew what they were expected to do. We wrote the session plan on the board, so that students know explicitly what they would do in that particular session. We gave students a real context and a real purpose in the use of English that went beyond the classroom, so that was motivating for them. Additionally, we modeled an example of VoiceThread presentation through which we hopefully answered indirect questions and clarified some doubts. [...]

On the other hand, the second part of the session was devoted to group work, produce some questions and peer assessment (assess other groups' questions). I think our microteaching session illustrated a good example of peer evaluation because each student had to underline some possible post-it errors from another mate, but not correct them since everyone had his/her post-it back. So everyone could learn from their own mistakes. [...]

I would like to point out that we spent quite a lot of time planning this session and rehearsed twice before put it into practice. We built it up from the basis that we wanted to create a micro-teaching plan which has some purposeful and contextualized communicative events. I believe that was the reason why we finally imagined we would get in touch with an Australian school and then we came up with the idea of doing a VoiceThread as a tool to meet new people. In other words, from the basis of our objectives we planned some appropriate material to achieve them. [...]

Anyway, on the whole, the organization of the session seemed to flow smoothly. Students appeared to be engaged in both parts. When giving the feedback, some groups told us that bringing some dictionaries, using ICT and positive reinforcement, or modeling the tasks were great points. And I do agree with them. Actually, I can conclude that it was the students who did the main work. I think that both Alba and me just acted as facilitators and tried to do our best by walking around and guiding students.

order to give feedback. The microteaching class was not systematically observed for data collection. However two specific sessions were recorded because they were directly related to the telecollaborative activity carried out during the practicum course

Specifically, the pedagogical, methodological and theoretical principles underlying this report index her developed understandings of the social dynamics in the communicative competence-oriented classroom. On the one hand, Anaís describes the role of the teacher as designer of conditions for learning based on pedagogical principles, model, guide and facilitator of needs-based and authentic opportunities for learning. She relates group-work technology-integrated cooperative contextualized learning, with real world relevance, which she articulates as “going beyond the classroom”. She, then formulates clear learning objectives to be measured and evaluated at the end (paragraph 1) of the activities that integrate technology into her teaching. She emphasizes the role of the students as active agents in the process, deploying various available technological tools which aid the teacher in constructing communication-based practices. These are then related to other teaching concepts i.e., peer assessment, intercultural communication setting to achieve their learning goals (paragraph 2). In paragraph 3 she returns to the idea of planning and highlights teacher’s skills, starting from defining clear goals and objectives for the students and creating appropriate conditions to achieve them (see Episode 3).

Her reflections of experience, which are displayed in Extract 71 below, demonstrate that her decision to implement telecollaboration into her teaching and her choice of tools was informed by awareness of possible pitfalls as she had experienced them during her own engagement. This implies that she does not adopt a stance of integrating technology into her teaching without some critical thinking. Specifically, she reasoned that while telecollaboration was and can be useful and knowledge enriching it can also be bumpy and stressing at times due to several factors such as time difference and group dynamics (and also technological deficiency, which is not mentioned here).

Extract 71:

I am very grateful to our corresponding university mentors, Melinda and Randall, because they guided us during all the podcast development in the sense that they provided us with some tools they thought could be useful, such as Second Life (SL), dropbox, and so on. I agree with the idea of meeting and working with people via SL is more realistic than writing emails, which takes a long time to write and read. Nonetheless, in my case, I got in touch with the members of my group via email most of the time. [...]In my opinion, any group work experience depends on the attitude/behaviour of the group members you have to work with (awkward, responsibility, etc.).

Actually, it was my first online exchange experience and, as a whole, it has left me quite a good taste in my mouth. The fact of the matter is that I ended up with a very good opinion about the experience in the first term (in which we had to discuss some points of our unit), whereas in the 2nd one it has not been such good. In my case I suppose this latter experience could be caused by people's commitment degree and feeling between each other; you may do not know the reason why but people (in general) always work better with one group than with another, it is natural.

She specifically discussed the relevance of group dynamics translated in different levels of participants' commitments in the development of interaction in (tele)collaborative activities. This can also be considered an indicator that she is coming to understand that learning does not necessarily occur without conflicts, knowledge that probably emerged from her telecollaborative experience in the second semester. She found that whereas in the first semester, her expectations from the meeting were materialized into clear and tangible outcomes, the same did not apply with the group she was working with in the second semester. She seemed to use this incidence as an opportunity to reflect and critically evaluate the affordances and constraints of telecollaborative group work. In doing so, she related the need for flexibility towards group work and telecollaboration as another context for group learning. She stated: "people (in general) always work better with one group than with another, it is natural".

11.2.2. Process-based data

Voicethread was the first new technology recommended to the student-teachers to use to introduce and present themselves and their work to their American peers. Anaïs wondered about the relevance of this tool to their purposes as teachers. She asked “But can we use Voicethread in primary?” (October 6, 2009). (On the other hand, this was the tool that Caterina eventually conceived of as the key tool for her teaching sequence activities, thus demonstrating to her peers that it was a relevant tool for primary education level). Anaïs also eventually integrates this tool into another more embedded activity that includes telecollaboration (more details further on).

EPISODE 8: DEVELOPING DIGITAL AND INTEGRATED SKILLS

EVENT 45: SCHOOL OBSERVATION (OCTOBER 2009)

Recognizing teaching and learning value of telecollaboration

At the school, Anaïs observed implementations of telecollaboration, involving email exchange. Reflecting on the theoretical premises she was being taught, she related her observations of this type of language teaching with the curriculum goals and conceptual framework of CLT. She posted the following in her diary:

Extract 72:

Friday 30th October

Today I would like to focus on one important thing.

5th grade students have just started to telecollaborate (in Catalan) with students (also 5th graders) from another school, in Santa Coloma de Farners. I think this can be directly linked to the Communicative Approach: use real material in a real context and with a real purpose that really motivates students for writing. Now each member of the class has an e-pal friend in the other school and they'll get to know each other throughout the course. In fact, further on, I think students from the other school will go on an excursion to Sant Cugat (in order to visit the Monastery and so on) so maybe they will visit our school. When students realised this possibility (to know their friends face to face), they got very excited! Wow...If I were a child, I would have liked to do the same!

Her own experience with tools and people using these tools generated new understandings about network-based pedagogy. As seen in Episodes 2 and 5, Anaïs explored and experienced the learning value of telecollaboration in both asynchronous and synchronous modes of communication and she saw how to formulate objectives for the classroom using telecollaboration as a basis for learning. Through telecollaboration Anaïs experienced that she could learn from others and also help others' to learn, thus consolidating her own understandings of dialogic learning (Episodes 2 and 5). Throughout the semester, she also witnessed her fellow classmates' endeavours to design technology-integrated teaching and listened to their reflections of their implementations; namely Caterina and Adrian.

EVENT 46: VIRTUAL INTERACTION (DECEMBER 2009)

Experiencing “languaculture²⁰” and learning potential of telecollaboration

The extract below demonstrates another reflection on her experience with telecollaboration and the contextual factors that influence teachers' decisions and the way they organize and deliver the content of their teaching. However, the linguistic and cultural orientation that Anaïs and her American peers undertake while on task make this extract particularly relevant for the conceptual development regarding technology (telecollaboration)-integrated pedagogy. The three virtual partners shape the dynamics of the interaction through interplay of multiple situated identities and social roles through which they reflect on, articulate and authenticate their teaching choices (Mead, 1934; Reiman, 1999; Edwards, in press). In doing so, they create frames of meaning and interpretation of the situation they are engaged in for themselves.

²⁰ Term borrowed from Agar, (1994) describing the interrelationship between language and culture (see also Lantolf & Johnson, 2007)

Extract 73:

1 Anaïs dice: but be careful if they're interested in some topics such as drugs,
2 sex...cause parents may not like that..
3 Imy dice: These are Korean students Anaïs, not Spaniards!
4 Anaïs dice: Hahahah
5 Imy dice: just kidding!
6 Sook dice: That's interesting point
7 Imy dice: actually Americans would be worse!
8 Anaïs dice: yeah!
9 Imy dice: but you could steer students into certain areas
10 could students write about rising rates of drug addition in a
11 certain country?
12 would that be inappropriate?
13 Anaïs dice: That's right Imy
14 Sook dice: Koreans don't have drug problem yet
15 maybe sex
16 but it's too hard to talk in public
17 Anaïs dice: if students talk about whatever topic in a polite way could be fine
18 Sook dice: I am thinking about showing University papers for model
19 Imy dice: so these are taboo topics? then maybe steer a student toward
20 entertainment or sports?
21 Anaïs dice: I only say parents from Barcelona are "beyond protective" (don't
22 know how to say it in English, sorry) do u understand what I mean?
23 Imy dice: "helicopter parents"
24 Sook dice: I hope they can come up with interviews, book review, school
25 events...
26 Anaïs dice: And you have to be careful
27 Sook dice: overprotective you mean?
28 Anaïs dice: yes
29 and many teachers have problems because of some families
30 Sook dice: Korean parents will not lose in terms of overpre..
31 Imy dice: this would be interesting to research
32 the new colloquial expression for really overprotective parents
33 is "helicopter parents" because they "hover" over their kids

The participants embark on their cultural identities Catalan (Anaïs), Korean living in the USA (Cho), and American (Imy) to construct and interpret their conversation. Through this additional identity tone, the two parties explore and exchange information about their respective social and cultural teaching contexts. In doing so, they shape this conversation into a genuine exploratory interaction of both professional and personal content.

Anaïs talks about problematic situations and social adversities that Catalan school teachers often need to face. She displays her individual accountability as a Catalan person and

teacher in Catalunya and points out to Cho that the social and cultural context defines specific responsibilities that the teachers have. She talks about her own responsibilities in relation to parents in Barcelona (lines 1-2). The peers work through humor to compare the sociocultural contexts they are working in (lines 3-7; 14).

The conversation becomes even more genuine and relevant to foreign language education when the participants act on their linguistic identities as Native and Non-native English Speaker. When Anaïs describes parents from Barcelona as "beyond protective", she indicates a lexical gap (lines 21-23) to which her peers as English language experts respond (lines 28-32). Cho suggests the English adjective "overprotective" (line 27), while Imy, as American native proposes a colloquial expression, proper to the US context and explains the meaning (line 34).

Arguably, such events appear to have further exemplified the relevance of telecollaboration to generating pragmatic opportunities for FL teaching and learning, triggering concept maturation regarding technology and learning. In turn, they nurtured Anaïs' motivation in transferring the network-based practice to a real classroom setting.

EVENT 47: CLASSROOM INTERACTION (FEBRUARY 2010)

Calming down fears about technology and technology-mediated learning

The activities in second semester, which implied a more direct involvement with technology, made Anaïs feel scared since the podcast technology proposed was entirely unfamiliar territory for her. She relates her fears in the following.

Extract 74:

When I first heard I had to do a podcast, I did not know what it was. It seemed a lot of work and the only thing I knew for sure was that it meant to work in collaboration with American students. I felt scared, that was my first sensation, because I thought students from the UIUC would have an excellent command of TIC, whereas I had not. Luckily, Melinda calmed us down by saying we were in charge of the pedagogical part of the podcast (pre & post activities) while students from Chicago were TIC experts. That sounded much better.

Anaïs states that these fears didn't have to do with technology per se but with the requirement to work with people with an excellent command of technology, which made her think that she wouldn't be able to contribute. The tutor explained that the task required that the UAB student-teachers acted on their expertise in pedagogical matters, while the UIUC student-teachers would contribute their technological expertise; thus clarifying the interdisciplinarity involved in this collaboration.

EVENT 48: VIRTUAL INTERACTION (MARCH 2010)

E-Mentoring: Externalizing understandings on pedagogically-informed technology integration

Engaging with her peers online, Anaïs used her existing understandings of FL pedagogy to guide her peers into how the technology should be framed in pedagogical practice.

Extract 75:

1 Jaska Peretz: So, I can record the children voice. One of us can do the single
2 sentence part, and for the group part I will be needing Janire's
3 help. So, we are two and we can find one or two friends.
4 Jaska Peretz: It would be nice.
5 Jaska Peretz: nice.
6 Anaïs: but would be better that the ones that do the
7 sentences are the same ones for the conversation
8 Anaïs: is more real for students
9 Jaska Peretz: Okey!
10 Jaska Peretz: We can do that.
11 Anaïs: I mean a friend first says a sentence (individually) and
12 then all friends become part of the conversation

In extract 75, the three student-teachers are discussing the content of the podcast. They had previously agreed that it would include people speaking about their hobbies followed by a conversation amongst friends on hobbies in order to teach language related to hobbies. Anaïs pointed out that the conversation should involve the same people in order to make sense for the students (line 8) and form part of a meaningful learning endeavour. At the end of this creation, she stated that she felt proud of the final output of the podcast, which increased her motivation.

The online component of her learning allowed her the experience of working with people from different disciplines, enact her own agency and expertise as pedagogue and experiment with the concept of technology as a useful tool akin to real-world practices and its relevance to the foreign language classroom.

The remaining section relates interactional data from Anaïs' microteaching session to further exemplify Anaïs' development of a unified set of interrelated, complementary, interwoven competences developed across interactions with tools and social agents at different times of the course; and in relation to previous university instruction and personal characteristics. The following event denotes Anaïs' epistemological understanding of the concept of telecollaboration for FL learning. She dictates that this type of technology integration does not involve bringing technology in the classroom for the sake of technology *per se*, the teacher must ensure that the proposed technology use aligns with pedagogic concepts and has real-world relevance.

EVENT 49: CLASSROOM IMPLEMENTATION (APRIL 2010)

Concretizing knowledge: Integrating telecollaboration in teaching practice

As described at the beginning of this chapter, in her microteaching course, Anaïs presented the planning of an introductory session to a telecollaborative exchange between Catalan and Australian students. Important background information is that Anaïs was co-teaching with Alba, another student-teacher who was attending the microteaching course but did not participate in telecollaborative collaboration. This meant that Anaïs acted as ‘mentor’ in the design of the activity as far technology implementation and integration into pedagogical practice is concerned. Anaïs and Alba explained their planning to their classmates as follows.

Extract 76a:

1 ANA we wanted to say before starting the activity that eh... it is embedded in uh... an
2 english school project on countries for *cicle superior* students so this is not this
3 is not a topic-based activity but instead is a... we've tried to... to give students a
4 real purpose of the use of english that goes beyond the class uh so we expect
5 them that they can see that... english is a powerful tool to communicate so they
6 will have a real context and a real purpose okay the project is on countries so
7 fifth-graders you will be fifth-graders um... i'm going to get in touch with an
8 australian school so during... throughout all the course they will get in touch
9 via email via other multimedia resources so you as fifth graders you will
10 have to activate your knowledge your background knowledge and the
11 vocabulary you have learned during your life and that's all. Okay the final
12 product of our project at the end of the course will be that... students will make
13 a... a film a video in which they will have to talk about australia with things they
14 have discovered about this culture this country about food about whatever they
15 like... the things they like the most so they would be these things put it
16 altogether in the video and the students at the end of the course will be assigned a
17 different role so a student will be the presenter another one the actors maybe the
18 ones who cannot be recorded can be the cameras or the set designers and... and
19 that's all just to give you an idea of what we are going to do now
20 [makes a plan with the contents of the course on the board to which she refers
21 during her introduction] [...] we are going to talk a little but about the project
22 that we told you yesterday we are going to start working with then we are going
23 to do a question-structured review in which you will see a real example that we
24 made for the australian teacher through a voicethread presentation you'll see
25 later what's this alba is going to tell you... and then you're going to work in
26 groups of four if possible you will have to create and invent your own questions

27 questions that you would like to ask to...to fifth grade australian students then
 28 you will correct other groups' questions and finally you are going to come to the
 29 front say your questions and classify them according to groups that we
 30 make different categories. Is it clear?
 31 ST1 *si*
 32 CLAS Yes
 S
 33 ANA yes okay

Here is an outline that reconstructs the rationale behind the design of the teaching activity that includes telecollaboration:

With the aim of teaching language through the use of language embedded in a real context, Anaïs constructs a network for learning, in which she hands over the floor to the students and empowers them to take control of their learning and make new connections with geographically-distant others; she creates opportunities for students to assume an active role in their learning to explore and inquire about new knowledge i.e., learn about other cultures, countries, and meet new people and thus expand their cultural and linguistic horizons through peer interaction rather than teacher-student interaction (lines 1-17).

She used Voicethread, a tool which she herself had used at the beginning of her telecollaborative experience to introduce herself to her UIUC peers (and which she had previously questioned its relevancy to primary education students). Anaïs again related these telecollaborative exchanges to CLT and conceptualized telecollaboration as a valuable and motivating tool for language learning through real communicative events.

Specifically, she retakes the methodology of project-based learning, the concept of real communication in English and embeddedness in a larger school project (lines 1-2). Anaïs utilizes CMC with Australian speakers of English as an authentic situation and emails as authentic materials to establish an analogy with real world communication and hosts real

communicative events in the target language (lines 3-6).

She integrates technology-mediated interaction via asynchronous modalities i.e., email to native speakers. The decision for these tools, which she later explains is based on her own experience with working with people from distant timezones.

At this point, Anaïs and Alba operationalize their understandings and developed epistemology of learning as embodied in interaction with various social agents. More specifically, the pedagogy they are implementing indexes their developing understanding of distributed instruction; that meaning is distributed across tools, artefacts, multiple actors, and settings, leaving behind the conceptualization of the teacher as all-knowing and primary carrier of knowledge.

In the pedagogy they appear to be endorsing, the teacher acts as a designer/creator of opportunities that allow students to engage in inquiry in an interactional classroom; the online exchange provides opportunities while guiding the learning process. Acting on their role as knowledge-facilitators, Anaïs and Alba initially model the process and describe the outcomes the teacher should guide their students towards. They explain that the teacher as a facilitator of learning based on what the students know up to that moment and then scaffold subsequent learning, thus relating the idea of learning as taking place in the students' ZPD (lines 22-30). In other words, Anaïs is able to integrate CMC to create a languaging ecology i.e., language learning opportunities through social interaction/dialogue with other people.

Following the introduction of the telecollaborative experience, Anaïs and her partner, Alba, implement peer assessment in the simulated activity they are presenting.

Dialogic learning: Integrating peer assessment into blended teaching pedagogy

Extract 76b:

34 ALB okay now in order to correct your questions we are going to swap the
35 papers okay? so please this group [pointing group 3] can you give your
post-

36 its to this one? [to group 1] you [group 4] to that one [group 2]
37 JAU vale [...]
38 ALB so now you have to act as if you were teachers shh please pay attention...
so
39 now you have to act as if you were teachers and you have to discover or
40 identify possible mistakes okay? Spelling mistakes and word order. Let's
see
41 what we mean for example in the first sentence that Anaïs is writing on the
42 blackboard [Anaïs writing on the blackboard spelling cinema as
43 cynema*]... can you see a possible spelling mistake? Pay attention what
do
44 you think about the first sentence?

45 CLASS Cinema
46 ALB what happens with cinema?
47 CLASS *es amb una* i
48 ALB Yes so you only have to underline the words you don't have to cross no
49 you don't have to cross and you don't have to write the right word above
or
50 to correct [also gesturing the cross no write above] no you don't have to
51 make any arrow or something you only have to underline okay? Is it clear?
52 and now for example in this second question uh... is the word order
53 correct?
54 CLASS no no
55 ALB what's the problem here?
56 CLASS *el* do *abans del* you
57 ALB okay so you?
58 NAI *ah no el* do *va abans del* you
59 ANA if there is any mistake. Maybe a group is a fantastic group and...
60 ALB there is no mistakes

[groups start working on the questions and Anaïs and Alba go around the class supporting the group work]

61 ALB okay so now you are going to give the post its back to the groups so... give
62 the post its back

In this extract, Anaïs and Alba put into practice their developing ability to plan and set up multiple types of assessment to decentralize the assessment process and promote reflection (dialogic learning in the classroom and then online). They consciously emphasize and promote the social-roletaking that takes place in the classroom during this type of

assessment “act as if you were the teachers” (lines 38-39), they model and guide their fellow students in this process, teaching them how to go about this process while using symbolisms to make comments on their partners’ work (lines 40-60).

The student-teachers who were participating in this class positively evaluated and applauded the pedagogical relevance of this practice and encouraged them to continue implementing this pedagogy in real classrooms. As pointed out in the introduction of this episode, teacher-centred assessment continues to dominate as the inherited belief and practice in education despite intense discussion for dialogue-oriented decentralized assessment in mainstream teaching methods in schools.

Extract 76a illustrates at multiple times how Anaïs’ own experiences at the university and virtual activity influenced her subsequent actions and reflections. Anaïs transforms aspects of her personal learning network into a self-authored blended pedagogical activity, which she transfers to the FL classroom. She evaluated telecollaboration as a valid environment for learning about cultures and countries, real authentic environments mediated by the use of technology (which she has learned in class).

Evaluating this implementation, the tutor argued that a more appropriate introductory session of telecollaborative project aiming at bringing together students from around the globe who don’t know each other from before, needs to coincide with the features of true everyday communication i.e., asking questions about family, hobbies and sports and school. The university tutor suggested ways which could help Anaïs and her partner in the microteaching plan, to sequence activities and “build up students’ enthusiasm”, as she put it.

EVENT 50: CLASSROOM INTERACTION (APRIL 2010)

Projecting telecollaboration into the future: creating another period of learning

Extract 77:

- 1 ANA: but in fact... how how do you get in touch with this schools?
2 with another school?
3 UT: i can give you... exchange there's places
4 ANA: yes
5 ALB: or in some forums or...
6 UT: i can give you names a? and... you make contact...s
7 ANA: I would like to do it
8 UT: okay i can introduce you to an Australian that can give you
9 contacts plus there's... there's places in the internet that
10 have...looking for school exchanges
11 ANA: yeah okay
12 UT: I think it's called EU network I'll have to check... I can give
13 you that

In extract 77, Anaïs “translates her confidence and flexibility into a curiosity about organizing telecollaborative environments” (Antoniadou, 2013). Anaïs and Alba ask for concrete information about getting in touch with other schools, and about finding telecollaborative partners (lines 1-2; 5). Anaïs states her willing to implement telecollaboration in her future teaching (line 7).

Anaïs’ personal interest and orientation to ensure learner engagement and motivation, which she had repeated and attempted to apply from the very beginning of the course, as well as the openness to the tutor’s comments about organizing telecollaborative projects, serve as indicators of the transferability of telecollaborative experience in actual teaching practice in her case. On Anaïs’ request, the tutor committed to sending her information for setting up school telecollaborative projects (lines 8-9; 12-13).

In the future I will re-sequence my telecollaborative teaching to make it more realistic in terms of time

In her report, Anaïs remained open-minded, flexible, and willing to take the risks inherent to telecollaborative implementations. She acknowledged the problematic aspects of her design in sequencing and expressed her intentions to improve and try the session out in real practice. Her reflection reads as follows:

Extract 78:

With regard to planning, Elliot commented that ours may be too ambitious for a micro-teaching session and I do think so, but this does not mean I won't use it in a real class by re-sequencing the session plan.

Dooly (2010) includes these characteristics/attitudes in her definition of Teacher 2.0 (p. 290). She also relates, among other things, that Teacher 2.0 should “understand that the technology is there to be used to support learning, not as a crutch for lessons that would not engage students in the first place” (*ibid.*: 289).

It is important to note at this point that Anaïs' simulated implementation of telecollaboration in an assessed academic context and willingness to integrate telecollaboration in the future, enacting flexibility and openness to 'risky' or 'uncontrolled' situations was neither a straightforward nor spontaneous outcome; it was a goal that she had set for herself at the beginning of the course. From the very beginning and throughout the course, Anaïs acknowledged that her main problems were the fact that she always had big visions and plans, needed to always have control over situations, which made her feel stressed when things didn't go as planned.

At several moments of her practical experience, at the school and at the university, she stumbled upon several empirical indicators that these personal qualities were idealistic and

clashed with the pragmatics of professional practice and pointed to the need to move towards flexibility and develop tolerance for ambiguity. In this implementation of telecollaboration, she seems to be enacting her disposition towards flexibility.

11.3. Caterina's case

This section traces instances from Caterina's trajectory with technology, illustrating the process underlying digital literacy and understanding of the place of technology in communication-based competence oriented pedagogy.

11.3.1. Product-based data

Learning about technological tools for the FL classroom as mediating resources and ways of integrating educational technology was an additional- and longed for – knowledge for all the student-teachers. Caterina was particularly welcoming of the opportunities that she was offered for learning about and experiencing technology during her initial teacher education because, as she comments, such knowledge and experience were absent from her background as a language learner.

Extract 79:

I am happy because I have experienced SL in a learning-teaching context and it may be useful for my future as a teacher. New technologies are very important nowadays and who knows if I will be in charge of an online collaborative task. In fact, I would like to. The times I talked to my UIUC peer I thought I would like to give a similar opportunity to my students, in which they could use English to communicate to English speakers (meaningful communicative events using target language with a real purpose).

At the end of the practicum, she acknowledged the important role of technologies in modern society and education, and classified her experience with network-based communication (language) learning environments as a potential tool and object of future teaching. She

represented her own experience with telecollaboration (mediating technology, organization, group collaboration) as a model of use of tools, resources, and for organization of similar experiences for her future practice.

Borrowing Wells' (2002) formulation, telecollaboration became an “object of imagination”, in the near or more distant future for both Caterina and Anaïs (section 11.2 above).

11.3.2. Process-based data

Episode 9 explores Caterina’s development of digital literacy. It relates events from her class and virtual meetings that generated opportunities for learning about and managing technology for personal and teaching purposes within the competence-based and communicative pedagogy by which she was being trained.

EPISODE 9: DEVELOPING DIGITAL AND INTEGRATED SKILLS

The following extract illustrates an instance of tutor-paced interaction, in which the tutor encourages Caterina to be creative in her teaching. To this latter aim, the tutor represents technology as a potential tool with real world relevance for FLE and as another line of thinking regarding communicative language teaching. In doing so, she provides the opportunity for the student-teachers to project themselves into the world of technology-integrated communicative pedagogy. This is the first explicit, as opposed to the implicit scaffold of experiential learning, for the student-teachers to reflect on the embeddedness of technology in the classroom.

EVENT 51: CLASSROOM INTERACTION (NOVEMBER 2009)

Tutor scaffolding on meaningful innovative teaching

Extract 80:

- 1 UT well my suggestion was that you had each... that you put them into a
2 group and that they wrote a new version of the book [...]and it makes
3 them feel ooh we are doing a textbook for young kids and it makes
4 them feel really important by giving them this kind of responsibility
5 they like that we're gonna we're gonna do materials english we're
6 gonna do English materials for the youngsters you're not young you
7 know you're old and grown-up they love that yeah? so that's that's a
8 good strategy there so... [...]they'd love that yes it makes them feel
9 so important [...]
- 10 JAU yes yeah it's a final show [laughing] you know for your your unit
11 CAT how can I... to them writing a new version? By giving them...
12 UT having them decide as a group say okay you've got to come up with
13 one... it depends on the level of your students but one or two new
14 verses okay so... then you give them an example uh the white goat
15 the white goat what do you see? i see a a purple cow looking at me
16 and then give them another version of what was it that you said
17 blue eyes blue eyes looking at me uh...how would you do it?
- 18 JAU do you see a- a i see orange ears listen to me
19 UT so you give each group divide in groups one group is looking at the
20 animals the other group is looking at the... face and they have to
21 use... you say okay a group of two there they have to draw it colour
22 it you scan it you make voicethread whatever...
23 or just a powerpoint and then they have to teach it to the p5
24

Specifically, the tutor builds on the premises of authentic purposeful learning with real world relevance and models an idea of a task that involves giving students the opportunity to create materials to teach language to younger learners. This, as she states, is a responsibility that they would like (lines 1-9). In this learning scenario, she evokes the role of the teacher as organizer of group work for an initial discussion- brainstorming of ideas (lines 12-14), then supporting the students in their learning process through textual or oral examples (lines 14-16), and promoting creativity and imagination in an innovative context facilitated by new technology. She highlights the potential of such interventions for further encouraging students' creativity and motivation (lines 19-23). She suggests that Caterina use Voicethread, a technology that the student-teachers themselves had used to introduce themselves to their UIUC peers for one of her activities. In its technical specifics,

Voicethread was an adequate tool, since it combined PowerPoint functions, largely familiar to the students, but was, at the same time new and innovative since it allowed them to record their voice and share it with other students online.

EVENT 52: SCHOOL IMPLEMENTATION (JANUARY-FEBRUARY 2010)

Implementing computer based instruction (Voicethread)

Extract 81 is taken from the end of Caterina's academic trajectory towards 'teacher-hood'. She relates using certain educational technology that she had used to introduce herself to her UIUC peers, namely Voicethread. She proudly conveys the following as evidence of her 'new' knowledge and competence and success in engaging students in creative and dynamic activities.

Extract 81:

"A good teacher knows how to integrate technologies into his teaching" is another main competence EPOSTL (2007) mentions. As far as I am concerned, I can integrate technologies into my teaching, but just the few technologies I know. When I was in school no technologies were used in class and that is why I do not know many educational technologies. Even that, in Practicum III and IV (school and Practicum sessions) I learned really good educational technologies for presenting and managing dynamic and creative activities.

1. One example is voice thread that I used in my teaching sequence. I'm very happy because students liked it very much and they really enjoyed recording their voice to create a storybook. [...]

I would like to show you some pictures [removed by researcher] of students and I using voicethread to record the voice to finish the final product, which was VT storybook. On those pictures you can see as students enjoyed pretty much recording their voice to tell their own story and how they watched the VT. They were very proud of their job and they wanted to show it to their tutor. Click here <http://voicethread.com/share/873086/> to see the VT storybook.

Here, she emphasizes her developed ability to plan teaching units integrating technology that she had learned in the practicum as a motivating, yet pedagogically integrated tool in the scope of CB/CL instruction.

In the second semester, the student-teachers were required to create technology-integrated learning environment with the help of their UIUC peers as technological experts. They were required to apply their conceptual understandings and skills which they had acquired up to that moment to design a pedagogically-informed learning environment that would integrate technology as a mediating tool for cognitive and competence development. The instructions to the task consisted in reflective questions to guide them in externalizing the meanings of their planning, instruction and technology-mediated learning, based on what they had experienced in the first semester.

Caterina enthusiastically engaged in the task. She met multiple times with her peer in Second Life and produced more interactions than Natalia and Anaïs, who resorted to other more familiar, and less demanding platforms for their meetings (MSN, Skype and emails) in order to overcome technical problems they encountered when using SL.

EVENT 53: VIRTUAL INTERACTION (MARCH 2010)

Getting familiarized with 3D worlds and their educational affordances

On the software management level, Caterina relates an instance where she and her classmates engaged in a scavenger hunt activity, prompted by their tutors and guided by their UIUC peers. The scavenger was designed to help the ‘newbies’ (UAB students) to locate teaching and learning spots in SL. Caterina expressed her appreciation for the opportunity to discover this 3D virtual world and its educational potential offered by this guided exploration of teaching and learning environments in SL. Her wiki evaluation reads as follows:

Extract 82:

The day we needed to look for interesting places in SL and report them was good, because we became aware of teaching resources/places in SL and some of them were really good! Furthermore, we kept in touch with SL in general.

Caterina characterizes this event as a contribution to developing awareness of teaching resources in 3D virtual worlds. She implies that she was able to see the educational value of certain resources and imagine ways in which these resources could be applied in pedagogical practice.

EVENT 54: VIRTUAL INTERACTION (APRIL 2010)

E-Mentoring on pedagogically-informed technology integration

The following interaction took place while Caterina was required to integrate the podcast technology in her teaching. According to curriculum requirements, Caterina was the one who would be evaluated on the implementation of the podcast unit in actual classroom practice, while her UIUC peer, Jenny, was only required to participate in creating the podcast. In this light, Caterina was the one who established the needs of the content of instruction according to her teaching context. Following the guidelines of the task and attempting to answer the questions, Caterina reflects on the ways in which the podcast would achieve teacher's goals and learning objectives in the classroom. Prior to this interaction, Jenny had asked questions about the teaching needs of Caterina's teaching context, thus establishing a supportive frame for Caterina, and helping her out with formulating learning objectives through the use of teacher repertoire, actions which echoed classroom interactions and other peer interactions (see Episode 3).

Extract 83: (Second Life)

1	Cate Pixelmaid:	The main idea content of the podcast would be.. Learning
2		English through a story
3	Jenny Luponox:	alright.
4	Cate Pixelmaid:	or should we explained with details. I mean.. to work on
5		a grammatical structure, to promote creativity (I think it
6		does..) [...]we could mention the creativity, since it's

7 something very important here
8 Jenny Luponox: hold on. what kind of creativity? will you explain
9 more?
10 explain.. :)
11 Cate Pixelmaid yes I think that kind of video promotes creativity since
12 with plastiline they can create the stories they want.. and
13 it's quite different from the videos they always see.. **but..**
14 I'm just thinking maybe what promotes creativity
15 would be an activity, but not the video..
16 Jenny Luponox: oh, I see. now i understand what you mean.
17 since the story has a flow, but no words at all, students can
18 create their own stories after wathing the video, right? it
19 might improve kids' critical thinking and abilities to
20 develop their language skills. so by the end of our lesson...

In this extract, Caterina and Jenny first establish a common frame of reference regarding the content and mode of instruction i.e., teaching grammar through the communicative scenario of storytelling (lines 1-3). As Caterina points out, the story told by the podcast would allow the students to be creative in their language production, which she considers a very important component in this scenario (lines 4-7). Note in line 14-15, how Caterina, while on task, reflects on and critically evaluates the role of the podcast technology in language learning practices in the classroom (reflection-in-action, Schön, 1983). She documents her awareness that it is the instructional activity that sets the conditions to achieve these objectives – and in which teacher guidance is essential- and not the video itself, which is the tool for this construction. Jenny states that she understands her thinking and adds to the concept of creativity. She points out the potential of the video (which has no words) for developing critical competence, allowing the students to create their own meanings of the video representations (lines 16-20).

EVENT 55: SCHOOL IMPLEMENTATION (APRIL 2010)

Applying Computer-Mediated Pedagogy

The sequence of this scenario is articulated in the following textual production.

Extract 84

Activities

5 min.: Daily routines

5 min.: Introduce the vocabulary in the Podcast (verbs and colours) through flashcards and a whole class brainstorming (verbs) on the whiteboard.

8 min.: Before watching the video: Teacher explains students they are going to see a video about two elephants. Teacher asks students some questions (wrote on a slide) and students try to find out the answers while they watch the video. Questions: What are Elephants' names? What are they doing? What colour are the elephants? Watch the video (5 minutes long)

3 min.: After the video: Teacher should ask for volunteers to answer the questions (*first slide annex 1*) and congratulate them if they manage to find out the answers.

10 min.: Teacher should explain students they are going to watch the video again but that they should pay attention to the actions now. Say to students:

"What are Sky and Pinky doing? Are they sleeping? Are they dancing? Are they playing? Are they shaking a tree? Are they kicking the ball? Are they eating? Are they speaking? Let's see!" Teacher should write the verbs which didn't appear during the brainstorming on the whiteboard. While students watch the video once again teacher should stop the video in different scenes and ask:

"What are they doing? or What is she/he doing?", wait for an answer and then rephrase what students have said in present continuous. Students can repeat the recast and do the mimic of the activity. Teacher can help students saying:

"Sky/Pinky is..." and wait for a completion in present continuous. Students will be able to do it since the video also mentions the actions in present continuous.

5 min.: In the second slide (*see annex 1*) there are some actions the elephants in the podcast do or don't; teacher should ask for volunteers to come to the front and circle (interactive board) the actions the elephants do and cross out the actions they don't do. Teacher should ask students to repeat each action: "They are playing a ball game. They are not sleeping".

10 min.: Creating a figure with Play-doh/plasticine. Teacher gives students play-doh/plasticine and students create a figure doing an action. When all the students finish they have to present their figure and describe the action it is doing using PC. Teacher should also create a figure and model the presentation: It's a monkey. It is eating bananas.

Caterina positions herself in favour of authentic communication-based conditions for language learning and the concept of 'students critically do and she as the teacher helps/guides them in the process'. She proposes brainstorming as an initial activity in order

to get in touch with students' existing knowledge of verbs, the podcast technology as a scaffolding tool for elicitation and introduction of knowledge and the teacher's interventions to guide the process; model new knowledge, and introduce new verbs to describe the actions of the two elephants featuring in the podcast.

Projecting acquired knowledge into the future

Extract 79 in the product-oriented section related Caterina's willingness to integrate network-mediated learning environments in her future teaching within the premises of the CB/CL instruction paradigm. At the end of the year, Caterina repeats her confidence about the knowledge she had acquired during the practicum experience.

Extract 85:

To be honest, I am very happy. I feel good with myself because I improved and learned a lot. I know Life Long Learning is essential to be a good teacher and I am sure I will continue improving. Even that, I am ready: I can teach; and, I think I can do it very well. I will always do my best and I will try to put in practice all my background knowledge.

In extract 85, Caterina acknowledges the need for Lifelong Learning. At the same time, she appears confident with her existing knowledge, which she considers useful for facing the challenges that her professional future may entail and promises to do her best in the future and apply her existing knowledge to her teaching.

In extract 86, she relates the students' response to her teaching implementations.

Extract 86:

As a teacher I have to admit that I have had the best time ever. I had never enjoyed teaching so much because from the first day I was amazed on how children responded, how they took into account what I was doing for them... Nobody had ever thanked me for doing a lesson, and in this school I received the most beautiful compliment a teacher can receive: in my last day they gave me a book with really nice missages [*sic*] thinking my effort; I even cried. I felt that I had chosen the most beautiful job in the world. It may sound very exaggerated but I felt so happy that I could not stop smiling for some days and I decided that it was worth the effort to spend a whole life teaching even if you hear these words only once.

As she states, her students, as significant others in her professionalization process (Mead, 1934), acknowledged, appreciated and thanked her teaching efforts. This was an emotionally-loaded experience for her, which culminated in the development of self, confidence and competence as a teacher (ibid.). As she states, the students' response and acknowledgment of her efforts reinforced her sense of belonging to the teacher community and gave her confidence about her decision to continue pursuing this profession. Thinking about the future, she states that the outcomes she obtained during the practicum and in *extenso* her academic formation constitute emotionally and cognitively loaded experiences to make her feel competent, confident and willing to continue learning about and improving her teaching.

Summary

As stated in the overview of this chapter, its purpose was not to relate an analysis of human-computer interaction. It rather aimed to trace Natalia, Anaïs and Caterina's experience with technology from the beginning of the practicum to the end of the year, when they related an epistemological understanding of network-integrated pedagogy through model teaching and explicit engagement with designing technology-integrated teaching.

Episodes 1-6 in Chapters 9 and 10 demonstrated that their engagement with technology as the medium for task purposes generated positive learning outcomes. Specifically, this network-mediated learning arrangement gave them the opportunity to inquire and learn about specific content such as learning to plan, work and think dialogically and apply dialogue in their teaching. In turn, these experiences engendered internal meanings about technology-mediated pedagogy and initially fostered intuitive understandings of the ways in which technology could be integrated in pedagogy for educational purposes.

Certainly, the integration of the network component into their learning practice motivated the student-teachers to learn to manage these tools themselves, develop specific digital skills and conceptual knowledge regarding the pedagogical potential of technology. Chapter 11 illustrated that all three student-teachers, through experiential learning of telecollaboration, became confident and developed motivation for implementing different types of technology. This confidence and motivation engendered competence in carrying out and managing teaching activity in such environments. Their initial concerns were transformed into enthusiasm with the tools they learned, authorship of technology implementations in classroom pedagogy and motivation for the future based on a conceptual understanding of pedagogical implementation of technology.

Literature reports teachers' reluctance and persistence of technophobic attitudes that impedes them from opening up to implementing technology-enhanced environments (Kessler & Plakans, 2008). At the same time, it has been widely acknowledged that technology is not a panacea and cannot be integrated everywhere. The view that teachers need to use technology in their teaching acknowledges that technology needs to be context- and needs- specific, and appropriate for the pedagogical purposes at hand. Many authors

emphasize that an important aspect of learning to teach with technology has a lot to do with developing awareness and flexibility around such mediated practices through critical appraisal of experiential learning in terms of affordances and pitfalls (Müller-Hartmann, 2005; Fuchs, 2005; Antoniadou, 2011).

In this context, attitudes towards technology and pedagogical designs incorporating technology emerged precisely from an awareness of the constraints through experience. For instance, Anaïs' modelling of technology integration in section 11.2 provides evidence to support the idea that using and integrating telecollaboration through specific tools and in concrete ways was a conscious judgment call that she herself made. Within this judgment call she provided the conditions for technology use as mediating specific pedagogical goals i.e., language learning emerging through real communication, need to open classroom to the world, and foster students' motivation.

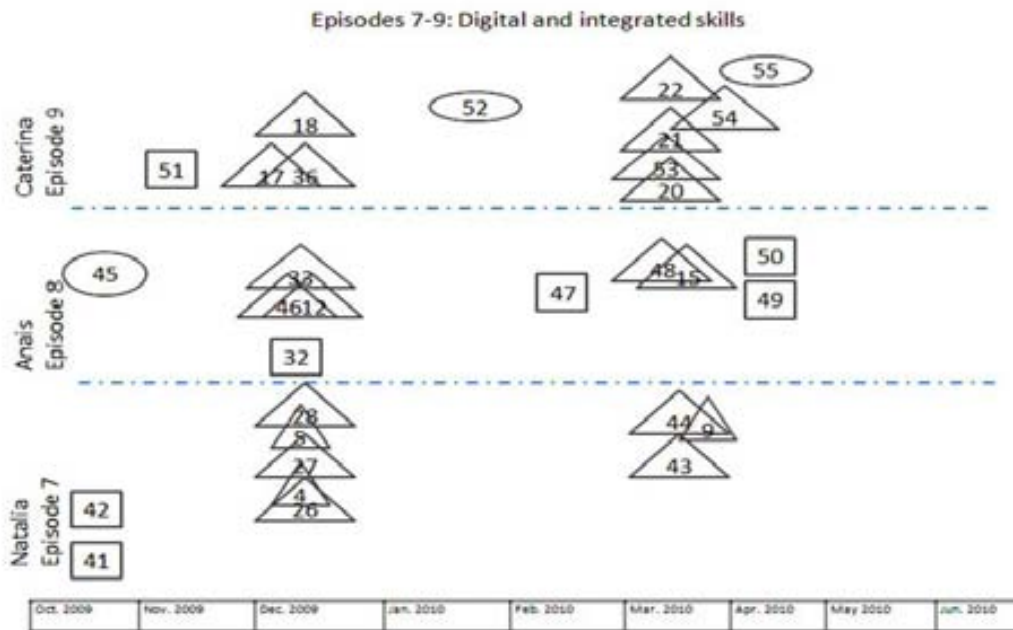


Figure 11: Timeline of events in Episodes 7-9

Events represented in Figure 11

Episode 7 (Natalia): Developing digital and integrated skills

Event 41: CI (Oct 2009) - Fear at the idea of technology and learning

Event 42: CI (Dec 2009) - Tutor calms more fears related to technology

Event 43: VI (Mar 2010) - Operationalizing concepts learned to design technology-integrated pedagogy

Event 44: VI (Mar 2010) - Creating technology for the classroom

Episode 8 (Anaís): Developing digital and integrated skills

Event 45: SI (Oct 2009) - Recognizing teaching and learning value of telecollaboration

Event 46: VI (Dec 2009) - Experiencing "languaculture" and learning potential of telecollaboration

Event 47: CI (Feb 2010) - Calming down fears about technology and technology-mediated learning

Event 48: VI (Mar 2010) - E-Mentoring: Externalizing understandings on pedagogically-informed technology integration

Event 49: CI (Apr 2010) - Concretizing knowledge: Integrating telecollaboration in teaching practice

Event 50: CI (Apr 2010) - Projecting telecollaboration into the future: creating another period of learning

Episode 9 (Caterina): Developing digital and integrated skills

Event 51: CI (Nov 2009) - Tutor scaffolding on meaningful innovative teaching

Event 52: SI (Jan-Feb 2010) - Implementing computer based instruction (Voicethread)

Event 53: VI (Mar 2010) - Getting familiarized with 3D worlds and their educational affordances

Event 54: VI (Apr 2010) - E-Mentoring on pedagogically-informed technology integration

Event 55: SI (April 2010) - Applying Computer-Mediated Pedagogy

Key:

□ CI - Classroom Interaction

△ VI - Virtual interaction

○ SI - School Implementation

Part V

Epilogue

Give me a fish and I eat for a day. Teach me to fish and I eat for a lifetime.

Chinese Proverb

12. Conclusions

12.1. Summary of research

This doctoral dissertation put forward an exploratory case study of teacher professionalization in the context of a practicum course at the Universitat Autònoma de Barcelona (UAB), where aspects of telecollaboration were integrated in the standard learning arrangement. In line with the aims of the Department of Language and Literature Education and Social Science Education, the final research objective was to discern pedagogical implications of applied teaching practices; in this case, from integrating network-based, collaborative, participatory environments in Initial Teacher Education programmes.

The research used a mixed-methods approach with a strong qualitative component to examine teacher learning in both its process and product dimensions; and determine the ways in which blended (multimodal) interactions can afford rich socially mediated and distributed processes for future educators' cognitive development.

The main strengths of this research lie in its focus on the naturalistic case study method; that is to empirically investigate blended FLtE “within its real-life context” using multiple

sources of evidence (Yin, 2003: 13); and to provide a detailed contextual analysis of the phenomenon at hand in order to construct meaning in context. Rather than isolating and investigating variables that may influence teacher education in blended environments, this research placed the analytical focus on the interrelationships that are formed between context and multimodal interactional activity. It specifically examined the ways in which student-teachers in this sociocultural context gradually mastered new tools for thinking and organizing classroom practices and became competent in designing and integrating various configurations of technology-mediated communicative environments in their teaching, including telecollaboration. The findings were ultimately evaluated against the formal criteria for teacher education, put forward in the European Portfolio for Student-Teachers of Language (EPOSTL²¹) and Catalan curriculum.

Overall, this research advanced an understanding of teacher learning in an eco-system of contextualized educational opportunities distributed across a variety of multimodal interactions in three individual cases of student-teachers with different idiosyncrasies, learner histories, personal ambitions and goals. The analysis hopefully helped the reader to discern the varied dynamics, task delegations, roletaking and student-teachers' orientations and agentic positioning that guided a dialogically constructed knowledge and competence in lesson planning, working and contributing to professional community, conceptualizing and using technology for educational purposes.

²¹ As mentioned previously, an adapted model of this categorization was distributed to the student-teachers during the course as a tool to help them understand, set and rank priorities of their learning and also as guidelines in their end-of-year self-evaluation. A copy is available in Appendix 2.

12.2. Discussion of findings

Literature cautions that current arrangements of ITE tend to continue to be about application of research-based knowledge to practices in which the tutor is the primary holder and distributor of legitimate knowledge to the apprentices (Childs, Edwards, & McNicholl, in press). To this account, the research demonstrated that in the blended arrangement, the student-teachers had the opportunity to actively explore other venues and resources of learning about communication-oriented classroom practice (e.g., technology resources, models of formative assessment) and to make sense of telecollaborative learning through experience, distributed across cognitive and affective components (Antoniadou, 2011b).

The findings indicated how expanded social mediation generated a continuous flow of information, providing the tools for individual evaluation of practices and encouraging the student-teachers to take initiatives and adopt new methods of classroom practice that were not used at the school. In Vygotskian terms, the analysis recounted what the 3 focal student-teachers were able to do before and after social mediation by multiple others, and engagement with tools and resources. It demonstrated that, in this context, the process of learning was multi-scaffolded and advanced in varied experiential engagements, physical contexts and activities, which revealed affordances of pedagogically-designed blended environments for learning within the participants' ZPD.

For instance, the student-teachers transformed socially-distributed knowledge e.g., tutor modeled peer assessment practices became part of their own practices –both for their own learning and as part of their planned interactions for their students. Later on, this concept was applied in student-teachers' own efforts to embed this assessment method in their

teaching, to which they sought support from their virtual peers. For example, Anaïs' virtual peers suggested practical ways to set up fair assessment standard procedures, while Caterina and Natalia modeled this method to their virtual peers and encouraged them to incorporate it in their teaching. Student-teachers continued exploring this concept throughout their engagements with lesson planning. In turn, this process led them to re-externalize these personal, now scientific, meanings and transfer them back to the social plane contributing to others' (virtual peers') knowledge on the one hand, and consolidating their own learning on the other.

Vygotsky argued that: "learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Once these processes are internalized, they become part of the child's independent developmental" (1978: 90). Through this lens, the latter aspect of virtual activity provided an expansive occasion for learning facilitating externalization-in-interaction. In the context of teacher education, Johnson (1999) points out that when teachers are given multiple opportunities to theorize about their work, their theories become the basis for how they conceptualize, construct explanations for, and respond to the social interactions and shared meanings that exist within their classrooms. Moreover, "when theorizing opportunities move to the public forum, teachers become contributors to the substance and processes of their professional discourse communities" (Johnson: 2000: 5).

The analysis evidenced that the virtual interactions provided a meaningful context in which the student-teachers could purposefully engage with (discuss and learn more about new concepts) and use them as basis to carry out professional collaboration.

This can be considered important quality advancement. As shown in the extracts, the issue of assessment was a situated example of conflict between espoused beliefs that derived from learner background and engrained metapragmatic models of assessment as teacher-centred on the one hand, and perceived external requirements for formative assessment across agent configurations on the other (Edwards & Mercer, 1987); the extracts also showed that the student-teachers' experience during school placement also corroborated the need for change. They questioned their own experiences as learners, compared this new knowledge with school observations, sought to learn more about these new concepts, and then put them in practice, and indicated that the expanded frame of people to which they could ask for help further facilitated this change. It was equally possible to discern how these student-teachers gradually moved from the receiving end of information and instruction, where they positioned themselves as the 'less experienced others' to the contributing end and engage in peer-tutoring, now positioning themselves as 'equally-competent others'.

More recently, Edwards' (in press) empirical findings trace teachers' 'fragile knowledge', which she attributes to lack of opportunities to engage in meaningful dialogue with others and consciously reason on their own classroom experiences and findings from classroom practice. This author advocates that teacher education programmes should provide opportunities for student-teachers to externalize their knowledge and contribute to others' knowledge in order to "expand the object that one is working on by bringing to bear the sense-making of others and to draw on the resources they offer when responding to that sense-making (Edwards, in press: 4). Specifically, the three focal student-teachers Anaís, Caterina and Natalia deployed the various configurations of resources of the blended

environment of participation to develop and dynamically transform concepts such as reflection, critical thinking, student-centeredness, and technology-mediated pedagogy from the level of observed practices to concrete situated and personalized cognitive models of teaching. In other words, as the student-teachers were encouraged to ‘voice’ their own concepts, both through questioning and dialoguing about their own work and that of others, the participants strengthened their own theoretical basis while contributing to a growing body of knowledge about teaching.. These findings also point to what Edwards (2007) termed relational agency which involves the competence of working with others, listening and taking into account others’ opinions, reciprocate and contribute to others’ knowledge. Based on her experience with teaching, and teacher education, Edwards points out that this skill is underlying in teacher professionalization.

Similarly, the telecollaborative experience related a model of practice i.e., steps to follow, tools to use, factors to consider. The findings demonstrated that while telecollaboration was intended and explicitly presented as a resource for the student-teachers’ own learning and development of competences, skills and knowledge, it was transformed into a conceptual understanding of CB/CL teaching through technologies and a strategy for future teaching by the participants involved. Underlying these findings is the notion that learning involves, to a large extent, imitation, which may, depending on the individual, lead to creation, imagination, and creativity.

In Vygotsky’s (1998) sense, imitation is intentional, goal-oriented and is guided by leading thoughtful and intentional questions. Mead (1934) points out that imitation of significant others is a central process underlying socialization into a community extensible to identity formation. In Bakhtin’s dialogic view of language, the outcomes reflect a dialogic,

polyglossic and heteroglossic acculturation activity into teacherhood. Overall, the final outcomes mirrored an “intertextuality of voices” understood as an imitation of previously socially-distributed discourse and experiences; then sedimented knowledge and re-externalized in a different time and space (Swain, 2006). The data indicated that the UAB student-teachers online discourse bore significant similarities with tutor’s discourse, as she had previously articulated in the classroom; that is, telecollaboration provided a setting for acting out and externalizing learned language and concepts. The data show that enhanced social participatory contexts provided more ‘voices’ to be taken into account for the final outcome. Imitation of these ‘voices’, as significant others; that is recognized and respected models for the student-teachers’ professional aspirations and endeavours, documented vigorous learning opportunities and outcomes e.g., consolidated concepts and communicative skills which were multiply applied to boost individual and collective performance.

At the same time, re-voicing others certifies the dialogic character of the learning process across modes. It portrays the very essence of dialogue in the participants’ willingness to suspend assumptions, open up, listen and examine others’ opinions: tutor, virtual peers and school teachers. Arguably, dialogic interaction underlied the student-teachers’ entire socialization process into the teacher community and culture, within and across face to face and virtual learning environments, expanded through telecollaboration.

Schon's (1971) “loss of stable state” provides another useful lens for evaluating the affordances and framing the pedagogical implications resulting from the integration of telecollaboration in teacher education pedagogy. According to Schön, a stable state is provided by familiar educational and learning practices and it is conducive to a ‘box-type’

of learning with limited opportunities for expansion. Contrarily, enhanced demands trigger more effort and cognitive engagement by presenting practitioners with the need to leave their 'comfort zone' and experiment with other possibilities. Schön identifies the loss of a stable state as a means for change in people's ways of thinking, understandings and practices through increased cognitive load and prompts for the development of higher order thinking skills. More recent writings also express the view of generating enhanced demands to learners as a trigger of higher-level cognitive outcomes (Edwards, in press).

Student-teachers' initial reactions to the proposed network mode of learning, including interaction with relatively unknown others attest to their perception of 'loss of their stable state of learning'. They initially reacted to the idea of working with and confronting American postgraduates and native speakers of the language with fear and anxiety. In addition, it could be observed that this learning proposal produced an initial feeling of discomfort about language skills and a somewhat inherited feeling of inferiority. Nonetheless, the extracts demonstrate that this pedagogical proposal eventually became an incentive for them to act as professionals and engage in more complex thinking in order to respond to the enhanced requirements of the environment, and consequently their academic formation. In the long run, student-teachers positioned as able to engage and respond to the challenges of this particularly demanding environment efficiently and effectively. They were able to take part, as equals, in professional work with peers from a country of high power and prestige, which translated into confidence and engendered competence and transferrable skills (Mahn & John-Steiner, 2002). In this light, student-teachers' imitation of language and practices (peer assessment, telecollaboration) can be also argued to carry a sense of security and a kind of insurance for an otherwise, risky practice, and even more in

an assessed framework.

12.3. Conclusive arguments

At the beginning, this research posed two questions. Based on the findings, the answers to those questions are the following:

1. How does the expanded set of interactions (with tutor, class and virtual peers) contribute to shaping previous and ongoing school placement experiences into scientific understandings of communication and competency-based instruction?

The findings depict learning as a process that came about through collaborative dialogue (Swain, 2000), a “web of relations” (Edwards, in press) formed between the student-teachers themselves and their social peers (university and virtual) for the achievement of their individual professional goals and aspirations. In this multivoiced framework student-teachers worked together to share and negotiate perspectives and construct meaning on teaching. The representation of their interactions depict the student-teachers in the process of “constantly developing and constantly nourishing an “epistemological curiosity” (Macedo, 2000:18) about the very elements of good teaching, relevant methods, resources and practices on the basis of their gradually developing knowledge and experience with teaching. In this light, the same findings attest that the blended/multimodal nature of the learning environment contributed significantly to the creation of an expanded "space of reasons"²², where the student-teachers actively engaged in reflection-in-action (Schön,

²² Language borrowed from Courtney Cazden (2013) in a seminar titled: “Language in the Classroom. The discourse of teaching and learning and its effects on achievement and inclusion”, given on February 2nd 2013 on the premises of the 1st International Scientific Seminar in Learning Sciences at the Universitat Internacional de Catalunya.

1983; Gero & Kannengiesser, 2008); while engaged in questioning and critically evaluating their own and others' practices. This engagement facilitated communication and understanding of what drives their interpretations and decisions in classroom contexts (Gonzalez & Carter, 1996 in Edwards, in press); and the process of making connections between abstract "situation-free" everyday concepts and contextualized ones informed by concrete teaching experience re-externalized in dialogue. This processes culminated in the construction of a robust scientific knowledge of learning to be teacher and learning to teach.

In toto, the findings demonstrate that the blended learning activities were important on two levels: (1) There were expanded opportunities for conceptual and epistemological learning e.g., how to formulate objectives, organize formative assessment, consolidate skills and competences and create new knowledge; and (2) it drove change and innovation of teaching practice and helped develop confidence.

The nexus of collaborative efforts between various social agents who shared teaching knowledge and experience and opportunities for reflection (Vygotsky, 1978; Wertsch, 1991; Johnson, 2000; Rogoff, 2003; Johnson, 2006) allowed the future teachers to relate and build on their existing knowledge of learning, to examine and frame their learning and teaching experiences to develop their own theorizing - and thus deepen their understanding of particular situated experiences and practices in dialogic ways.

2. What are the affordances and pedagogical implications of blended learning configurations for quality ITE in the 21st century?

Based on the above, the findings of this research allow to safely interpret that network-based activity as an integrated part of classroom and school experiences provided an expansive opportunity for learning.. In its augmenting nature, telecollaboration expanded classroom learning in unique and significant ways and thus substantiate a relationship between engagement in blended learning environments and acquisition of teacher professional literacy. At present, school placement and related experience is considered the predominant centre of activity for teacher learning to take place. The findings indicate the potential of integrated telecollaboration for providing another equally important context for forming professional relationships, which can afford a better conceptual understanding and learning about teaching, and substantially enhance classroom and school experience.

Certainly, in this study, telecollaboration created a representation of computer-supported dialogic model of instruction for student-teachers to follow, for whom such possibilities in the context of pedagogy may have been otherwise unreachable or reached only at a much later stage and not necessarily in an integrated manner. For one, this mode of learning enhanced the frame of reference regarding learning and development, including familiarity with specific technology within the array of educational tools that can help promote communicative pedagogy in the classroom. It also heightened awareness about the educational potential of these tools as well as their limitations. Furthermore, as already discussed in the above, this dialogic configuration of practicum gave the student-teachers opportunities to grapple with specific issues of concern to them while designing their teaching sequences. It also enabled student-teachers to apply and negotiate their existing knowledge in different contexts, to respond to diverse questions and create new meanings that were relevant to the needs of their particular working contexts. What is more, the

diversity involved in the exchange generated enhanced opportunities for involvement and reflection on their own practices so that they became better able to discern the most appropriate way of teaching a particular topic, while bearing in mind the situatedness of their teaching in the Catalan context and in relation to the larger community of schooling i.e., parents, teachers, tutors, learners themselves, society and thus social dimensions of their actions. In short, telecollaboration provided an additional, yet integrated ‘accumulation and learning-deepening space’ to share their experiences, provide suggestions, support and solutions to each other, and at the same time, an ‘action-space’, where the student-teachers negotiated the meaning of their practices and their plans, and most importantly became active contributors to their own and others’ learning process through professional discursive practices (Johnson, 2000; Mercer, 2000, 2004, 2010).

In this (teacher learning) context, the student-teachers experienced a developing competence to act, as professional educators, in contextually relevant ways, in both face-to-face and network-mediated environments (Kessler & Plakans, 2008; Kessler & Bikowski, 2011; Van Lier, 2011). At the end of the course, they identified this year-long experience as a memorable moment for them in their educational trajectory. They emphasized the corroborative nature of their development, in which they had so many people supporting them all the way through (see student-teachers’ reflections in Part IV). The analysis documented that this component of instruction had a strong impact on the student-teachers’ practices within the academic frame and a memorable experience for the student-teachers (Van Lier, 2011). This also created curiosity and willingness for future exploration and improvement, one with strong cognitive and emotional components. Going back to Vygotsky’s interrelationship between cognition and affect, the elements of safety,

confidence, reliance and encouragement were highlighted in their final reflections, providing evidence that this learning proposal became a multi-layered, socially and psychologically loaded experience that laid the foundation for cognitive development (J.P. Lantolf & Aljaafreh, 1995) and contributed to the development of understanding of the learning potential of dialogue. This, in turn paved the way for transferability and sustainability of dialogic practices in their future teaching.

To these latter issues Van Lier (2011) points out that:

At the end of our course, when we say goodbye to our students, we realize that they will pursue different careers, have different dreams, and will end up in many different situations. If we had any control in our classroom during the course, now that control ends, and we can only wonder what they will remember from all the things we did in our classes. And, recalling something Dick Allwright once told me, we may realize that perhaps the best thing we did was to create memorable occasions for language use and for learning opportunities” (2011: 390).

An attempt to transfer this realistic point of view to the present context and findings accounts for the argument that if the impact of experience was so strong within the academic frame and as the findings illustrate, aimed-for teaching practices were perceived, imitated and cyclically implemented in classroom practices during school placement, there is significant potential that they will also be transferred in the student-teachers’ future teaching.

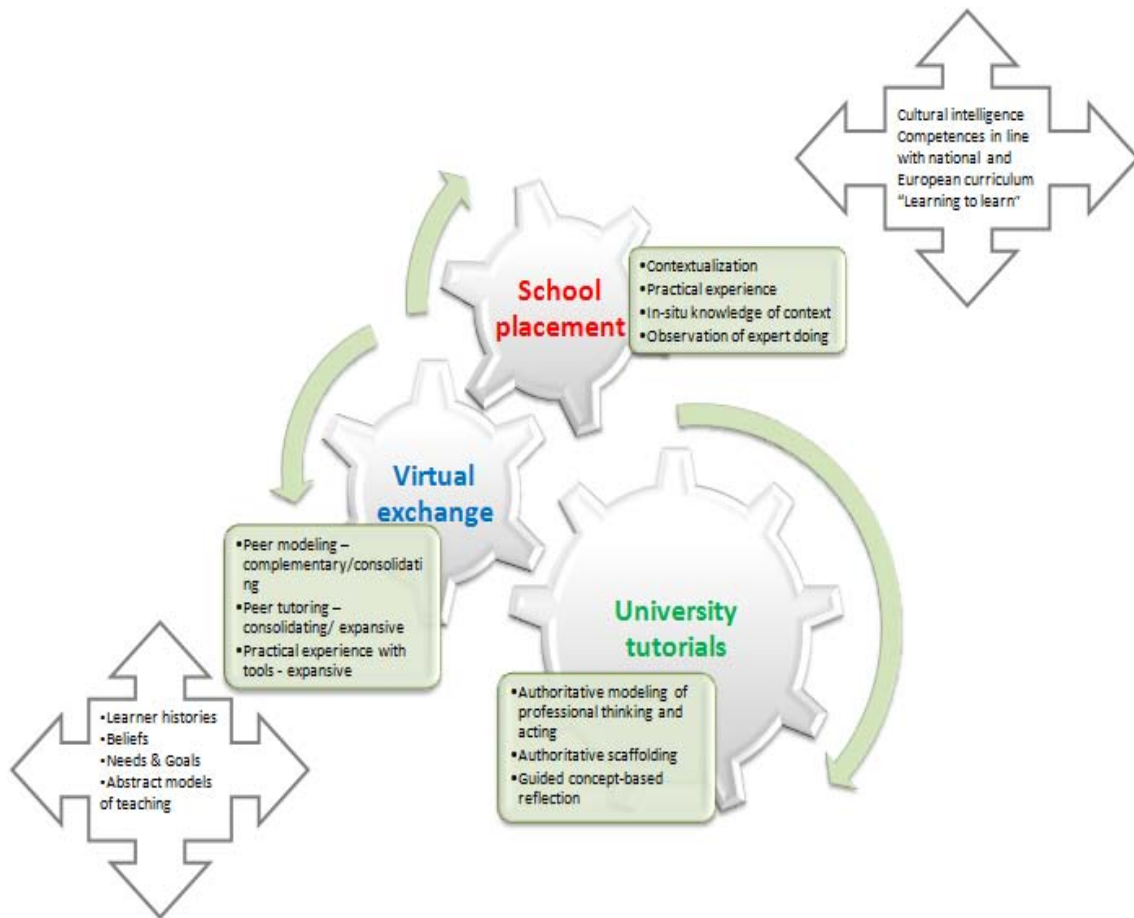


Figure 12: Representation of the mechanisms underlying the professionalization process

In closing, the findings substantiate that the hand-in-hand workings of telecollaboration and classroom instruction contributed to higher-order mental functioning and higher-order professional behaviour through extended dialogue, and multiplication of social and tool mediation. The analysis corroborates that, indeed, telecollaboration blended with classroom instruction and school placement constitutes a valid context for learning and can be efficiently used in ITE to respond to the educational and professional needs of the times, indeed, it should be regarded and implemented as integral – and not an added-on component to teacher educational endeavours.

12.4. Pedagogical implications

The above analysis and findings help discern the following pedagogical implications, which can be broadly summarized in two aspects:

12.4.1. Regarding task content, arrangement and distribution

These findings demonstrate that the developmental process was largely mediated by and distributed across (1) expert-scaffolded reasoning i.e., tutor-modelling of rational thinking about legitimate classroom practice; (2) virtual comeback, re-modelling and reinforcement of such thinking; (3) arguably more informed decisions for further action and self-regulated reasoning by the student-teachers. Specifically, the distribution of tasks, resources for learning, namely classroom interaction, online peer interaction and individual post-reflections enabled cyclical processes of action and reflection, through which the participants, complemented and arguably generated more robust learning outcomes. These observations highlight the pedagogical importance of cyclical alternation between guided (other-regulated) and self-regulated reflection as the student-teachers moved across multimodal settings of interaction (see Levy & Kennedy, 2004 for task cycling).

The task enhanced demands and practice of evaluating others' designs lent itself to an intentional, vigorous and rigorous operationalisation of previously-encountered concepts, in the classroom to a peer setting. In this sense, the university tutorials consisting in modelling adequate discursive practices and reasoning planted the seeds and opened the way for conceptually-rich and productive interaction online. In turn, the online interaction provided prolonged engagement time in the tasks thereby stimulating further reflection and action (e.g. the student-teachers took control of learning by asking questions to perceived

more knowledgeable others). The participants, actively complemented the knowledge gained from the classroom, thus multiplying learning resources, and filled gaps in their knowledge and consolidated their learning. This finding leaves implications for network-mediated peer work as a viable environment for teacher learning consisting in peer-scaffolding for professional improvement. Also it leaves implications for the sense of security and confidence that such environments can contribute to new teachers who are not experienced or immigrant speakers of digital language.

Very importantly, the perceived proximity to school practices (i.e., material used, tool selection, tasks proposed, and activity arrangements) can reinforce noticing of relevant objectives to teaching, perceive them as realistic for the future and reinforce the transferability of university instruction to future practices.

12.4.2. Regarding technology and network-mediated pedagogy

The network component allowed more time first and second relative freedom to the participants to pursue their interests and build on their individual interests/weak points. Considering the power differential that inevitably largely characterizes classroom talk, virtual interaction with peers allowed Natalia, Anaïs and Caterina to inquire about specific aspects of their teaching and discuss their own weak points in a less ‘power-differentiated’ context. The analysis of the online feedback documented these occurrences on multiple occasions. This alludes back to the conclusion that “CMC provides not only enhanced opportunities for interaction but also facilitates collaborative and comprehensible interaction” (Kitade, 2000: 163).

The asynchronous mode of communication (sharing of the drafts) gave the opportunity to

the student-teachers to first pinpoint specific problematic aspects of their partners' planning and then verbalize their arguments synchronously and thus formulating constructive feedback to their peers. In doing so, the participants ventriloquated/re-voiced expert teacher's discourse, in turn became the authors of the ideas and at the same time developed their communicative skills on a professional level.

This was discerned when comparing face to face and virtual interactions. In the tutorials the student-teachers were mainly positioned on the receiving end of the discussion, whereas in the virtual interactions they were on the giving end, able regulate their own discursive practices and eventually build up self-esteem and teacher identity as transferrable skills for the future. Underlying these outcomes was the need to respond, as previously discussed, to the enhanced demands of the environment, again established by technology mediation.

Similarly, the findings highlight the importance of allowing more time for the student-teachers to develop awareness and become conscious of the underlying workings of the telecollaboration as contextualized in CALL (including network-based) learning. Doing so could arguably contribute to building up more motivation for implementation of these practices in future teaching, based on the experience of the learning potential that CALL environments carries. At the same time, it needs to be highlighted that the sustainability of such change depends on the constancy of experiences in the school context and availability of resources for implementing telecollaboration or similar technology-enhanced endeavours.

Proximity with the school culture and practices, as discussed in the previous sub-section is fundamental. In this context, Anaïs experienced an implementation of telecollaboration in the school that she was teaching and positive outcomes from the perspective of the students

(e.g., motivation, language production), which seemed to nourish her motivation about implementing this method in her own teaching.

12.4.3. Methodological implication

Sfard, (1998) proposed the two metaphors of learning as having and doing to illustrate the stance that knowledge is not and should not only be understood as an objectified acquired entity but also as an action i.e., dialogic formation process shaped through participation in communities and interaction with more capable others. Departing from these modern conceptualizations, this research highlighted the relevance of using qualitative and quantitative analytical approaches to examine learning as process, affording aspects and contributions of multimodal dialogue. Mixed methods approaches such as the GT methodology complemented by quantitative components allow for an enhanced understanding of the formation process of teachers in a dialectic of emotional and cognitive aspects.

12.5. Limitations and windows for future research

This is a largely qualitative research of the teacher learning process in blended environments. Its purpose was mainly exploratory, descriptive and interpretative and it counted on a small sample of participants. Thus, the conclusions cannot be extrapolated in concrete causal terms. Likewise, the data gathered do not suffice to account for a concrete argumentation or empirical illustration of transferability or sustainability of learning on a post-academic level. Nonetheless, the data do suffice to argue that learning to learn through dialogue with others holds strong hope for the future of FL teaching and learning, as discussed in the above sections (as discussed in section 12.3).

These limitations open the path for a follow-up on these student-teachers in their professional life to delve more into the issue of sustainability and transferability and empirically determine the extent of sustainability and transferability.

This research provides evidence that, indeed, blended environments hold potential for teacher education by investigating the process qualitatively. At the same time discerns specific aspects and mechanisms of such environments that constitute effective and efficient teacher preparation and should be sought for in designing partnerships for teacher learning. Comparative experimental studies would be useful for further substantiating this conclusion. Larger-sample studies would serve to extrapolate conclusions.

In this research, the analytical focus was placed on the examination of the interrelationships between classroom and virtual learning activity, although it is acknowledged and accepted that the workings and development of online interactions constitute a world on their own. A deeper look into learning-conducive e-discourse for functional enactments of online communication would deepen understanding of the affording mechanisms of online communication for desired cognitive attainment.

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Appendices

Appendix 1: Curriculum requirements for Primary Education Teachers

(retrieved from the UAB website, section Grau d'Educació Primària)

Competències transversals

En finalitzar el Grau, l'estudiant serà capaç de:

- Comprendre, posseir i demostrar el conjunt de coneixements necessaris per educar als escolars de 6 a 12 anys d'acord amb les àrees curriculars que s'estableixen en l'educació obligatòria per a l'etapa d'EP.
- Aplicar els coneixements necessaris per al disseny, la planificació i l'avaluació de processos d'ensenyament i d'aprenentatge, contemplant el desenvolupament de valors ciutadans tals com la multiculturalitat, la igualtat de gènere, l'equitat, la sostenibilitat i el respecte als drets humans.
- Reunir i interpretar dades rellevants en el marc dels centres educatius d'EP que permetin re flexionar, e metre judi cis i emprendre accions relatives a aquesta etapa educativa.
- Transmetre informació, idees i problemes assertivament a altres professionals, en tot allò que pugui repercutir en una millora de l'educació i de la qualitat de vida dels escolars, propiciant les relacions amb les famílies i amb altres serveis de la comunitat.
- Desenvolupar les habilitats i estratègies d'aprenentatge i acadèmiques que permetin a dquirir un grau suficient d'autonomia en els estudis i, així mateix, comprendre la importància d'actualitzar la seva formació de manera permanent.

Competències específiques

- Gestionar la informació relativa a l'àmbit professional per la presa de decisions i l'elaboració d'informes. Analitzar de manera crítica el treball realitzat.
- Treballar en equips del mateix àmbit o interdisciplinaris.
- Adoptar una actitud i un comportament ètic, i actuar d'acord amb els principis deontològics de la professió.
- Reconèixer i avaluar la realitat social i la interrelació de factors implicats com a necessària anticipació de l'acció.
- Participar i implicar-se en els actes, reunions i esdeveniments de la institució a la qual es pertany.

- Analitzar i reconèixer les pròpies competències socioemocionals per desenvolupar aquelles que siguin necessàries per al bon desenvolupament professional.
- Mantenir una actitud de respecte al medi (natural, social i cultural) per tal de fomentar valors, comportaments i pràctiques sostenibles.
- Incorporar les tecnologies de la informació i de la comunicació per aprendre, comunicar-se i compartir en contextos educatius.

Competències generals

- Conèixer les àrees curriculars de l'Educació Primària, la relació interdisciplinària entre elles, els criteris d'avaluació i el cos de coneixements didàctics al voltant dels procediments d'ensenyament i d'aprenentatge respectius.
- Dissenyar, planificar i avaluar processos d'ensenyament i d'aprenentatge, tant individualment com en col·laboració amb altres docents i professionals del centre.
- Fomentar la lectura i el comentari crític de textos dels diversos dominis científics i culturals continguts en el currículum escolar.
- Dissenyar i regular espais d'aprenentatge en contextos de diversitat, fomentant la convivència a l'aula i atenent a la igualtat de gènere, a l'equitat i al respecte als drets humans.
- Estimular i valorar l'esforç, la constància i la disciplina personal en els estudiants. Dur a terme les funcions de tutoria i d'orientació per als estudiants i les seves famílies.
- Conèixer l'organització de les escoles d'educació primària i la diversitat d'accions que comprèn el seu funcionament. Conèixer els models de millora de la qualitat amb aplicació als centres educatius.

Appendix 2: Summary of EPOSTL criteria given to the student-teachers

(Adapted from Newby, D., Aljan, R., Fenner, A-B., Jones, S., Komorowska, H. & Soghikyan, K. (2007) European Portfolio for Student Teachers of Languages. A reflection too! for language teacher education. Graz; ECML)

A good language teacher must know her context. She can:

__ Understand the principles formulated in relevant local, national & European documents (e.g. Pla Linguistic del Centre, Common European Framework of Reference) and integrate them -as appropriate-into her teaching.

__ Design her lessons around the national & school requirements.

__ Look at the long-term goals of the school when designing lessons.

__ Look at the long-term goals of the students and community when designing lessons.

__ Integrate cognitive skills into her lessons (problem-solving, communication skills, research skills, etc.).

__ Understand the parents' expectations.

__ Take into account differing motivations for learning another language.

__ Take into account the affective needs of learners (sense of achievement enjoyment etc.).

__ Take into account the knowledge of other languages learners may already possess and help them to build on this knowledge when learning additional languages.

A good language teacher must know his supporting role. He can:

__ Integrate his students' diverse resources (languages, cultural background) as part of the learning process.

- ___ Use appropriate learning theories and research to guide the learning process.
- ___ Identify & investigate specific issues related to his students and/or teaching in the form of action research.
- ___ Adapt his teaching to contextual restraints.
- ___ Promote the value and benefits of language learning to learners, parents and others.
- ___ Critically assess his teaching on the basis of experience, learner feedback and learning outcomes and adapt it accordingly.
- ___ Critically assess his teaching in relation to theoretical principles.
- ___ Accept feedback from his peers and mentors and build this into his teaching.
- ___ Observe his peers, recognize different methodological aspects of their teaching and offer them constructive feedback.

A good language teacher must know methodology for spoken interaction. She can:

- ___ Create a supportive atmosphere for speaking.
- ___ Select meaningful interactional activities.
- ___ Introduce different spoken formats (telephone, presentations, transactions).
- ___ Help students learn communication strategies (ask for clarification).
- ___ Select/ create materials to stimulate speaking activities at all levels.
- ___ Help students learn to identify and use typical features of spoken language.
- ___ Integrate oral activities that help develop fluency.
- ___ Integrate oral activities that help develop accuracy.
- ___ Evaluate and select a variety of techniques to make learners aware of, discriminate and help them to pronounce sounds in the target language.

__ Evaluate and select a variety of techniques to make learners aware of and help them to use stress, rhythm and intonation.

A good language teacher must know methodology for written interaction. He can:

__ Evaluate and select meaningful activities that encourage creativity and written expression.

__ Introduce different written formats (emails, reports, forums).

__ Help students become aware of structure, coherence and cohesion in a variety of written formats.

__ Select/create materials to stimulate writing activities at all levels.

__ Engage students in activities that include participation in purposeful written exchange.

__ Encourage students to share information for written tasks.

__ Help students plan and structure their written tasks.

__ Help learners monitor and reflect on their own writing process.

__ Use peer assessment and group work in writing tasks.

__ Select and evaluate writing activities that help consolidate learning.

Appendix 3: Transcription key

Participants' pseudonyms.

NAT Natalia

ANA Anaïs

CAT Caterina

UT University tutor.

- Abrupt breaks or stops

? rising intonation

— (underline) stress

... stretching

[overlap: indicates simultaneous talk by two or more speakers, with one utterance represented on top of the other and the moment of overlap marked by left brackets

[] transcriber's comment

Adapted from Agha & Wortham (2005)

Appendix 4: Free (NVIVO8) Nodes (Open codes)

Name	Sources	References
1 Abolishing power relations	7	22
2 Modelling appropriate pedagogical communicative assessment and reflective practices for FL learning	6	22
3 At the top of the hill	6	19
4 What do I do about assessment	12	18
5 Internalized concept - Communicative language teaching	10	17
6 Re-operationalizing conceptual knowledge and skills to formulate new teaching practices	4	17
7 UIUC positive reinforcement	5	15
8 Using learned strategies to formulate objectives	6	15
9 Opening up to dialogic learning	11	13
10 Recognize and appreciate other's contributions to individual learning	10	13
11 Teacher control or teacher guidance - Passing the lead to the students	6	13
12 Experience of culture and language-related events in authentic context	5	11
13 Teacher actions - Providing for and supporting students in learning process	3	11
14 Developed reflection and critical thinking through diversity of opinions	9	10
15 Teacher as creator of opportunities for interaction and guide	7	10
16 Deployment of technology for professional and educational ends	2	9
17 Encouragement of communicative language events in the classroom	4	9
18 Giving constructive feedback	3	9
19 Learned to see mistakes as an opportunity for reflection and improvement	6	9
20 Supporting students in their learning - providing resources to support learning activity	5	9
21 Using conceptual knowledge to detect weaknesses or strengths and construct feedback	3	9
22 What's the purpose of your practices - Does that make real sense to students' learning	4	9
23 Coming across new methodologies, resources, methods of classroom practice beyond Catalan sociocultural context of teaching and learning	4	8
24 Flexibility - Adaptability to the students' needs	5	8
25 Integrating technology in communicative pedagogical thinking	4	8

26	Orientation to lifelong learning	6	8
27	Peer assessment	4	8
28	Questioning evaluating and modelling appropriacy of assessment student-centeredness realistic objectives in others' designs	4	8
29	Relating others' design with concepts- own practices to propose solutions	2	8
30	Socializing with transatlantic partners	2	8
31	Teacher as a model of language	6	8
32	How do you group and how do you assess	4	7
33	Initial insecurities with technology proposed	5	7
34	Learned to integrate real communication in the classroom - podcast example	5	7
35	Stressing the interdisciplinarity and integration of multiple approaches to teaching FL	5	7
36	Suggesting methods of classroom practice in line with CLT	3	7
37	Acknowledging each other's contribution	4	6
38	Attention span	3	6
39	Doubts about ability to give feedback to more capable peers	3	6
40	Evaluating aspects of telecollaborative experience - weaknesses pitfalls	4	6
41	Language-related events in telecollaboration	4	6
42	Learning to set up linguistic objectives	4	6
43	Using learned strategies to co-create new teaching plans	3	6
44	Confidence with using educational technologies in the classroom	3	5
45	Designed and used technology for real communicative events	3	5
46	Designing realistic language instruction for 4 year olds	3	5
47	Evaluating appropriate tasks for the classroom	3	5
48	Exchange of techniques and practices - Expanding ideas for the classroom-teaching contexts	2	5
49	Final understandings of real meaningful instruction	2	5
50	Incorporating online feedback in teaching unit	4	5
51	Learning to base assessment on linguistic objectives	4	5
52	Learning to move around with new technology and finding way through challenges and malfunctions	2	5
53	Peer engagement - accountability beyond task time - Prolonged engagement	3	5

54	SL experience difficult and challenging and not directly useful for teaching	4	5
55	Working on the language for formulating objectives	4	5
56	Accountability to your students	3	4
57	Exceeding expectations - Surprising self	4	4
58	for me it's difficult to receive feedback and i'm learning to to see feedback and use it to uh to change and to use the feedback something constructive and to improve my activities	3	4
59	Made the right choice studying teaching	2	4
60	Negative contextual contingencies that affected telecollaboration	3	4
61	Realistic objectives - vision of what is valid and what is not - peer guided reflection	3	4
62	Student-teachers' descriptions of telecollaborative experience	3	4
63	UIUC prompt reflection on language use in the classroom	2	4
64	Applying the language of feedback	1	3
65	Assessment for the students or for the teachers - A more human approach	2	3
66	Awareness about the importance of promoting critical thinking in learning	3	3
67	Beginners' insecurities - Shyness in the presence of others	2	3
68	Conceptualization of assessment	3	3
69	Engaging in multimodality	1	3
70	Experiencing online group work - division of labour-responsibility of work	1	3
71	I didn't feel comfortable with my English	2	3
72	Learned to engage students in learning activity	2	3
73	Learned to plan student-centred instruction - constructivist principle	1	3
74	Learning language for formulating linguistic objectives - The case of SWABT	2	3
75	Modelling expert teacher thinking-discourse	1	3
76	Modelling feedback	1	3
77	Promoting critical learning	3	3
78	Pushing for creativity and innovation	3	3
79	Starting work with the idea of continuous assessment	2	3
80	Teacher gives notes to students giving feedback about their work	1	3
81	UAB positive reinforcement	1	3

82	Appreciated (technology) resources and activities for interaction	2	2
83	Awareness about the importance of promoting innovation through new technologies	2	2
84	Developed confidence with TL	2	2
85	Free to take it or leave it	1	2
86	I saw students are not used to work in group, and that's something which makes me feel worried.	1	2
87	Insecurity with facing the class	1	2
88	Instructional and psychological support	2	2
89	JAU yeah we are used to be assessed that way	2	2
90	Learned terminology for setting linguistic objectives in the classroom	2	2
91	Learning new technologies has given me new ideas for the future	2	2
92	Making connections between settings school and university	2	2
93	NAT cultural experience yes but... i thought they they cannot help us because well... i felt it was a sort brick~ bridge between us~~UT why~ because of the objectives of the...~NAT we are teachers primary teachers and they are...	1	2
94	Perhaps it has been the first time in which I have really felt I was a teacher and everybody around me has considered that my work was worth the effort they did for me to implement it.	2	2
95	Practicum as a need-based instruction	2	2
96	Socialization in the school due to increasing confidence	1	2
97	The experience with SL was fine, although I do not think it was very useful.	1	2
98	They also said be realistic on time	1	2
99	Tutor's affective support and encouragement	1	2
100	ANA " But can we use VoiceThread in a primary school classroom"	1	1
101	Creating conditions for students production	1	1
102	Ensuring effective group work	1	1
103	Experiencing technology malfunctions	1	1
104	Forums as useful tools for brainstorming	1	1
105	hard for me was to contact with Janire and Jaska (does not matter how), due to time difference	1	1
106	i always try to control everything and organize and plan and... and this is hard and I can't control a hundred percent the class so...	1	1
107	I liked experiencing the implementation of a podcast because I think it is a very engaging resource for students. Students responded very well to it.	1	1
108	I need more initiative to deal with difficult situations	1	1

109	I think my peer may not like the idea we were working on and she decided to change it, although she should have talked to me (we could have change it) since it was quite disappointing.	1	1
110	Implementing peer assessment for collaborative reflective and critical learning	1	1
111	Improving technology-integrated pedagogical practice in the future	1	1
112	latter experience could be caused by people's commitment degree and feeling between each other; you may do not know the reason why but people (in general) always work better with one group than with another, it is natural.	1	1
113	Now that I have finished the year, I am reading again the competences and observing the ranking I did when beginning the term. I can admit that I have learnt a lot this year and most of the competences I thought I could not do, now I see I am learning or I	1	1
114	Natalia is very self-critical, too self-critical sometimes but she's improved a lot and that shows.	1	1
115	Podcast as scaffolding tool	1	1
116	Positive reinforcement by the tutor	1	1
117	Prolonged engagement in task	1	1
118	Respecting fears and anxieties	1	1
119	SL as more realistic technology	1	1
120	SL using an avatar what got us closer than using a chat	1	1
121	Special considerations for 4 year-olds	1	1
122	Suggesting and advising solutions and receiving acknowledgement	1	1
123	Theory emerging through practical experience	1	1
124	This has been a very challenging and profit experience for me.	1	1
125	Tolerance for ambiguity- Flexibility	1	1
126	Too much work is it going to be evaluated	1	1
127	Tutor's prompts to community building	1	1
128	UIUC prompt reflection on realistic objectives	1	1
TOTAL			649

Appendix 5: Tree (NVIVO8) Nodes - Axial codes

Name	Sources	References
Formative teaching and learning practice - Reflective skill	38	107
Modelling appropriate pedagogical communicative assessment and reflective practices for FL learning	6	22
What do I do about assessment	12	18
Re-operationalising conceptual knowledge and skills to formulate new teaching practices	4	17
Developed reflection and critical thinking through diversity of opinions	9	10
Using conceptual knowledge to detect weaknesses or strengths and construct feedback	3	9
Giving constructive feedback	3	9
What's the purpose of your practices - Does that make real sense to students' learning	4	9
Relating others' design with concepts- own practices to propose solutions	2	8
Questioning evaluating and modelling adequacy of assessment student-centeredness realistic objectives in others' designs	4	8
Evaluating appropriate tasks for the classroom	3	8
Language-related events in telecollaboration	4	6
Final understandings of real meaningful instruction	2	5
UIUC prompt reflection on language use in the classroom	2	4
i'm learning to to see feedback and use it to uh to change and to use the feedback something constructive and to improve my activities	3	4
Conceptualization of assessment	3	3
Assessment for the students or for the teachers - A more human approach	2	3
Awareness about the importance of promoting critical thinking in learning	3	3
Applying the language of feedback	1	3
Teacher gives notes to students giving feedback about their work	1	3
Modelling expert teacher thinking-discourse	1	3
Modelling feedback	1	3
Starting work with the idea of continuous assessment	2	3
Promoting critical learning	3	3
Free to take it or leave it	1	2
I saw students are not used to work in group, and that's something which makes me feel worried.	1	2
Implementing peer assessment for collaborative reflective and critical learning	1	1
Creating conditions for students production	1	1

Technology and learning	34	101
Experience of culture and language-related events in authentic context	5	11
Deployment of technology for professional and educational ends	2	9
Coming across new methodologies, resources, methods of classroom practice beyond Catalan sociocultural context of teaching and learning	4	8
Socializing with transatlantic partners	2	8
Integrating technology in communicative pedagogical thinking	4	8
Stressing the interdisciplinarity and integration of multiple approaches to teaching FL	5	7
Initial insecurities with technology proposed	5	7
Learned to integrate real communication in the classroom - podcast example	5	7
Evaluating aspects of telecollaborative experience - weaknesses pitfalls	4	6
Doubts about ability to give feedback to more capable peers	3	6
Language-related events in telecollaboration	4	6
Learning to move around with new technology and finding way through challenges and malfunctions	2	5
Confidence with using educational technologies in the classroom	3	5
Designed and used technology for real communicative events	3	5
SL experience difficult and challenging and not directly useful for teaching	4	5
Student-teachers' descriptions of telecollaborative experience	3	4
Negative contextual contingencies that affected telecollaboration	3	4
Experiencing online group work - division of labor-responsibility of work	1	3
Engaging in multimodality	1	3
Pushing for creativity and innovation	3	3
SL as more realistic technology	2	2
The experience with SL was fine, although I do not think it was very useful.	1	2
Awareness about the importance of promoting innovation through new technologies	2	2
Appreciated (technology) resources and activities for interaction	2	2
Learning new technologies has given me new ideas for the future	2	2
Forums as useful tools for brainstorming	1	1
Podcast as scaffolding tool	1	1
Improving technology-integrated pedagogical practice in the future	1	1
ANA “ But can we use VoiceThread in a primary school classroom~”, Anais, f2f1 - 6 October, 2009	1	1

Learning to set objectives	23	64
Using learned strategies to formulate objectives	6	15
Teacher as creator of opportunities for interaction and guide	7	10
What's the purpose of your practices - Does that make real sense to students' learning	4	9
Using learned strategies to co-create new teaching plans	3	6
Attention span	3	6
Designing realistic language instruction for 4 year olds	3	5
Working on the language for formulating objectives	4	5
Learning to base assessment on linguistic objectives	4	5
Realistic objectives - vision of what is valid and what is not - peer guided reflection	3	4
Learned to plan student-centered instruction - constructivist principle	1	3
Learning language for formulating linguistic objectives - The case of SWABT	2	3
Learned terminology for setting linguistic objectives in the classroom	2	2
They also said be realistic on time	1	2
Community and learning	29	62
UIUC positive reinforcement	5	15
Opening up to dialogic learning	11	13
Recognize and appreciate others' contributions to individual learning	10	13
Acknowledging each other's contribution	4	6
Doubts about ability to give feedback to more capable peers	3	6
Peer engagement - accountability beyond task time - Prolonged engagement	3	5
Incorporating online feedback in teaching unit	4	5
Instructional and psychological support	2	2
Practicum as a need-based instruction	2	2
Making connections between settings school and university	2	2
Tutor's affective support and encouragement	1	2
Perhaps it has been the first time in which I have really felt I was a teacher and everybody around me has considered that my work was worth the effort they did for me to implement it.	1	1
Theory emerging through practical experience	1	1

Teacher role and responsibilities in the classroom	21	58
Teacher control or teacher guidance - Passing the lead to the students	6	13
Teacher actions - Providing for and supporting students in learning process	3	11
Teacher as creator of opportunities for interaction and guide	7	10
Supporting students in their learning - providing resources to support learning activity	5	9
Teacher as a model of language	6	8
Accountability to your students	3	4
UIUC prompt reflection on language use in the classroom	2	4
I didn't feel comfortable with my English	2	3
Developed confidence	15	44
At the top of the hill	6	19
Learned to see mistakes as an opportunity for reflection and improvement	6	9
Flexibility - Adaptability to the students' needs	5	8
Exceeding expectations - Surprising self	4	4
Made the right choice studying teaching	2	4
I didn't feel comfortable with my English	2	3
Beginners' insecurities - Shyness in the presence of others	2	3
Developed confidence with TL	2	2
Socialization in the school due to increasing confidence	1	2
Insecurity with facing the class	1	2
Tolerance for ambiguity- Flexibility	1	1
Materializing CLT through concrete examples of classroom practice	20	40
Understanding CLT through concrete examples of classroom practice	10	17
Encouragement of communicative language events in the classroom	4	9
Suggesting methods of classroom practice in line with CLT	3	7
How do you group and how do you assess	4	7
Exchange of techniques and practices - Expanding ideas for the classroom-teaching contexts	2	5
Learned to engage students in learning activity	2	3

Creating conditions for students production	1	1
Lifelong learning	7	9
Orientation to lifelong learning	6	8
Theory emerging through practical experience	1	1

