Narrativised Teacher Cognition of Classroom Interaction: Articulating foreign language practice in the Amazonian context

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ABSTRACT

This thesis investigates teacher cognition of classroom interaction as represented in narratives by Amazonian language teachers. Language teacher cognition has been investigated in the great educational centres in Brazil, but has been overlooked as a research theme in Amazonas, the context of this study. In order to bridge this existing gap in language teacher research, the current study develops a narrative enquiry in the public and private school settings to find the different understandings of interaction in the English as a foreign language (heretofore EFL) classroom as articulated by teachers. The study is grounded in theories of teacher education and cognition, applied and socio-linguistics, socio-cultural theories and discourse analysis to further the understanding of concepts that are of rising importance in the EFL field: teacher cognition, classroom interaction, and narrative research. In brief, *teacher cognition* refers to teachers' mental lives and to the ways they perceive their practice. In this research, four constructs (knowledge, thought, beliefs, and decision-making) are considered to represent the broad conceptualisation of teacher cognition. C*lassroom interaction* corresponds to the collaborative moments which happen in the language classroom among students, or between students and teacher, in order to improve learning. *Narrative enquiry* relates to both the method and methodology which is used to understand diverse knowledge processes. In simple terms, in this thesis, narrative enquiry explores teachers' stories about their practice and determines the ways in which they can be analysed and interpreted. This qualitative research has been designed from a constructionist epistemological standpoint and an interpretivist theoretical perspective. Because it investigates complex concepts, this research does not follow one specific philosophical background but finds inspiration in critical pedagogy and matters of knowledge in the Brazilian context. The data produced by nine experienced EFL teachers was systematically analysed. Starting from the four individual constructs of teacher cognition, the interpretation of the data develops to concepts and themes which emerged from this initial analysis. The findings generated new understandings of the construction of knowledge as personal practical knowledge (PPK) and its relationship to other constructs of teacher cognition, to experience, to the teachers' individual contexts and to styles of storytelling. From these main findings, the present study proposes a model of *narrativised teacher cognition* to better understand the interrelation between the cognitive constructs and discursive strategies, as well as build a new and concrete dimension to teachers' articulation of their practice.

This thesis is addressed to all English teachers of Amazonas, my teachers, colleagues, and students.

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LIST OF ABBREVIATIONS

B – Teacher Beliefs

CI – Classroom Interaction

CIC – Classroom Interactional Competence

CLT – Communicative Language Teaching

DM – Teacher Decision-making

EFL – English as a Foreign Language

ELT – English Language Teaching

FG – Focus Group Discussions

FL – Foreign Language

FLL – Foreign Language Learning

ibid. – *ibidem* (Latin) – in the same place.

IC – Interactional Competence

Int. – Interview

K – Teacher Knowledge

L1 – First Language – Portuguese

L2 – Second or Foreign language – English

LL – Language Learning

loc. – location in the Kindle edition of books, represent electronic pages

LT – Language Teaching

Narr. – Narrative

PEC – Private English Course (also referred to as *the PEC*)

PPK – Personal Practical Knowledge

SLA – Second Language Acquisition

T – Teacher Thought

TE – Teacher Education

TEFL – Teaching English as a Foreign Language

TESOL – Teaching English to Speakers of Other Languages

1 Introduction

A search for an understanding of teachers' mental processes in relation to their classroom practice reveals that this involves the exploration of abstract domains. It also depends on several influential factors such as the contextual effects, individual and community realities, and diverse standpoints. In this thesis, teachers' practice is viewed through their own conceptualisation of classroom interaction; the context is explored in English teaching in Amazonas, Brazil; the realities are related to English teachers' lives as presented in their narratives; and the standpoints are considered in relation to teachers' voices and the researcher's interpretations of all the factors which emerge from the research. The teachers' mental processes are studied by considering four constructs of teacher cognition – knowledge, thought, beliefs, and decision-making.

In order to find the right way into the abstract domains of teachers' minds, this thesis needs to answer the following research questions: What are teachers' own conceptualisations of classroom interaction in relation to their context and experience? How does teacher knowledge influence the understandings of language teacher cognition in teachers' narratives? How do English teachers articulate cognition of classroom interaction in their narratives?

To answer these questions, this study discusses three underpinning ideas – teacher cognition, classroom interaction and narrative enquiry – which can add to the development of the Amazonian English teaching field. As will be

seen throughout this chapter, English teaching in Amazonas has developed in both public and private schools, and higher education institutions have been investing in new courses to develop the field. However, much needs to be improved in terms of language teacher education in the region to reduce the uncertainties about the future of the profession within this context.

In 2011, during training sessions on English language teaching in Manaus, my students, public school teachers from Amazonas, raised questions about the difficulties they had encountered to understand what they were doing in their classroom practice. They were interested in learning how to identify effective actions, or to recognise from their reflection the tools which would improve their practice. They also put forward their individual beliefs about language teaching in their different contexts. This discussion became the catalyst for this study, of which the main focus is the Amazonian English language teacher.

In my career as a language teacher trainer in Amazonas, I have become aware of teachers' different needs within their unique contexts. I learned that ongoing teacher development was not available to some of the teachers who needed to travel 10 to 28 hours by boat to reach the capital city (where training was available) from their remote towns. The discussions we had and the issues raised in those training sessions remained in my mind and in my notes. The students stimulated my curiosity about teachers' minds, triggering new thoughts and reflections, and helping me start a new journey as a researcher.

The present study led me to discover new conceptualisations and interconnections between complex ideas. It has also helped me understand what can be explored from teachers' minds, practices and stories. Most of all, this academic journey has led me to new paths and interpretations of old and new paradigms. Thus, this study offers the understandings of teacher cognition, classroom interaction and narrative from an Amazonian perspective – that of the nine participant teachers.

Having as a starting point the teachers' narratives, this study shows how the conceptualisation of teacher knowledge is gradually co-constructed through cognitive perspectives and discursive strategies. Then, this thesis is a search for the answers neither I nor the teachers could explore in the training course mentioned above. My position in this study is that of a teacher who knows, thinks, believes and decides about their own language practice and reflective teaching. I also understand that in teaching and learning, knowledge is co-constructed from teachers and learners' individual and social perspectives. Having situated myself in the research, I now provide an overview of the study.

1.1 Overview of the research

This study investigates language teacher cognition of classroom interaction as expressed in narratives. It starts from the perspective that English teachers construct their own understanding of interaction from a combination of influences which can include professional knowledge, personal experience

and contextual factors. This thesis also draws on the notion that teachers have a key role in the developments of their own educational context and follows a socio-cultural view of language teaching and learning. This interpretation is supported by the idea that teachers are “active thinking decision-makers, who process and make sense of a diverse array of information in the course of their work,” as stated by Borg (2006, loc. 72). This view establishes the role of the participant teachers as protagonists in their own individual stories as well as of this thesis narrative. In brief, the participants are nine English teachers of two educational contexts in Amazonas, namely, the private and the public school.

Three main ideas are considered in the study: teacher cognition, classroom interaction and narrative enquiry. They are understood as follows. Teacher cognition refers to the teachers’ mental processes which help shape their teaching. Although teacher cognition is usually discussed as an umbrella term which encompasses an array of mental constructions, for the purpose of the current study, four main constructs are considered (and later problematised): knowledge, thought, beliefs and decision-making.

Classroom interaction, in this thesis, is the meaningful interactive or collaborative moments which happen in the classroom between teacher and learners, or between students. This study aims to understand teachers’ own conceptualisation of interaction, considering that “classrooms are unique social contexts in their own right” (Walsh, 2011, p. 25). This view of *unique context* resonates with the focus on teachers’ own individual construction and interpretation of their practice which is discussed later in this study.

These cognitive and interactive aspects of teaching explored in this study have emerged from the teachers' narratives. In brief, a narrative is a teacher's individual story which is constructed from their teaching practice in the classroom, but not limited to it. In this thesis, the term *narrative* encompasses the ideas about the methodology, the method and the phenomenon.

These three underpinning ideas are studied as closely related to the influential aspects such as language teacher education, contextual effects, teaching praxis, discursive strategies, and reflective teaching, among others. In addition, the study gives voice to an underrepresented group of teachers in Brazil: those working in Amazonas. Thus far, most research into language teaching has been conducted in the south and south-east of Brazil, with less being developed in the more remote regions of the country.

The starting point of this research was the need to understand how language teachers' cognitive processes influenced their classroom praxis and decisions. In brief, praxis is considered in terms of teachers' reflective actions as stated by Freire (1998). The literature review developed from the encompassing idea of teacher cognition with attention to what happens in the English language classroom. The concept was then restricted to four constructs which better revealed teachers' mental processes: knowledge, thought, beliefs and decision-making. Topics such as teachers' decisions, students' actions, and notions of language teaching and learning brought into focus the idea of classroom interaction. Then, narrative enquiry became the appropriate methodology to resonate with the epistemological basis of this

qualitative and interpretive research. Thus, from a systematic analysis of participants' spoken and written narratives, it was possible to shape a model of narrativised teacher cognition. The proposed model aims to bring to light teachers' understandings of their classroom practice. It also makes it possible to develop a means by which teachers are able to investigate their own knowledge and coaches (or teacher trainers) can recognise teachers' individual needs and strengths.

1.2 The catalyst and the background for the study

When I started my career as a teacher of English as a foreign language (from now on EFL), in the early 1990s, there were no references to the idea of teacher cognition in our language teaching environment. In fact, the 1990s mark the introduction of teacher cognition in the language teaching field (Borg, 1998, 2006; Woods, 1996). At that time, in Amazonas, EFL teaching had started to move from substitution drills and repetition to communicative teaching. Nunan's *Language Teaching Methodology* (1991) and Brown's first edition of *Teaching by Principles* (1994) soon became primary sources for the EFL University courses, bringing to the attention, concepts of communicative teaching, cognitive principles, classroom interaction, and learner-centeredness, among other meaningful teaching and learning topics.

A decade later, working as a coach and observing teachers in practice, I realised that there was still much to learn about teachers' mental processes and actions. Drawing on works concerning supervision, observation,

collaborative learning and task-based learning (e.g., Bailey & Nunan, 1996; Freeman & Richards, 1996; Nunan, 2004; Wallace, 1997), I began to explore new ways to improve teaching practice. Works on reflective teaching and teaching experience (e.g., Richards & Lockhart, 1996; Schön, 1995; Wallace, 1997) also prompted group discussions in the pre- and post-teaching meetings with the teachers trained. In addition, teachers' difficulties challenged me to look for new paths to help improve practice, such as the use of narrative to trigger teachers' reflections (Duff & Bell, 2002), the systematic reflective feedback sessions (Bailey, 2006), and other methods which could have effective results on the teachers' learning process.

My first understanding of teacher cognition and its constructs occurred in relation to *beliefs* in Barcelos and Vieira-Abrahão's *Crenças e Ensino de Línguas* (2010). It became my guide in terms of finding initial references regarding the theme. I had already learned about some constructs such as teacher decision-making, knowledge, experience, and identity (Freeman, 2013; Freeman & Richards, 1996; Schön, 1995), but at that time, they were not thought of as constructs of teacher cognition. Only later, as an academic in higher education, could I develop some basic research with students related to beliefs and reflective practice in language teaching (Silva et al., 2010).

The background to my individual development as a teacher resonates with the background to this study. Gradually, teacher education has discovered its connection to cognition, interaction and narrative. In my view, studying teacher's mental processes through narrative can unravel complexities which

teacher trainers (or coaches, tutors, and supervisors) are not able to make sense of from observation alone.

In addition, understanding the constructs of teacher cognition and their interrelation facilitates access to teachers' minds. In the case of this study, the four constructs (knowledge, thought, beliefs and decision-making) complement each other in terms of bringing to life the several facets of teacher experience and what influences it (e.g., context, time, age group, and so on). In this thesis, the interrelation between the concepts is discussed in terms of such influences, especially the Amazonian context.

The EFL teachers from Amazonas, referred to as Eduardo, Lidia, Flora, Leonor, Marco, Natalia, Teresa, Barbara, and Nina (not their real names), offer their voices, experience, knowledge, thoughts, beliefs, and decision-making so that others can understand their perspectives of classroom interaction. Their narrative reaches new dimensions in their personal forms of articulation. Thus, more than having similar contextual conditions, participants represent the term *teacher* in individual ways by imprinting their personal styles in their narrative.

1.3 Accessing Amazonian educational settings: the contextual influences

Studies in English teachers' practice in the Brazilian educational system began to be explored in depth from the late 1970s (Celani et al., 1988). Some themes of study have been of special interest amongst scholars from both

the Education and Applied Linguistics fields, for example, reflective teaching (Pimenta, 2008), teachers' practices (Alvarez & Silva, 2007; Gil & Vieira-Abrahão, 2008), teachers' experiences (Miccoli, 2010), teachers' beliefs (Barcelos, 2008; Barcelos & Vieira-Abrahão, 2010; Battistella & Lima, 2015), interaction (Bedran & Salomão, 2013), discourse (Fiorin, 2011), English for specific purposes (Celani et al., 1988), and teacher education (Moita Lopes, 1996), among other areas. Nevertheless, there is still much to understand about these themes, especially in regard to specific and underrepresented settings such as Amazonas.

A detailed search reveals that the language teaching literature in Amazonas has not developed as much as in other parts of Brazil. This can be due to geographical reasons, but it also draws our attention to the gap existing in the field. A search for titles related to Language Teaching, Applied Linguistics, EFL teaching, among other themes, resulted in a limited number of useful research works. Most of the titles retrieved from national sources referred to electronic journals (e.g., Hitotuzi, 2007), PhD thesis or Master's dissertations (e.g., Kiss, 2013; Melo, 2014), and conference paper or proceedings (e.g., Avila-Nóbrega, 2011; Kiss, 2012; Moura & Souza, 2013).

Thus, from the works retrieved, two attracted my attention for the themes studied. One (Kiss, 2013) is a dissertation on the *loss of language* and *bilingualism* – not in English – which used oral narrative as its method. However, Kiss does not explore narrative enquiry in depth. The other (Hitotuzi, 2007) is an electronic article investigating the possibility of using *process drama* in EFL teaching in the public school system in the rural

settings of Amazonas. While both works bring a meaningful contribution to the understandings of language teaching in Amazonas, there is still a lack of work published in renowned scientific journals and books with a national reach.

There are related subjects such as the work of Barbosa (1995, 2002) which provide important reference work on phonology for future and current EFL teachers in Amazonas. The research explores the effects of the Amazonian accent (*Fala Amazonense*) on the way students pronounce words in English, suggests practice exercises and gives various related examples. Since their publication, Barbosa's works have inspired future research in the field (e.g., Santos, 2013) and helped teachers cope with pronunciation issues in the classroom.

Interestingly, as can be anticipated, a search for Amazonas (or Amazonia) on cyber search engines first reveals studies from the biological sciences and ecology, or any topic related to the rain forest. There are also an array of linguistic studies related to the structure of native languages (e.g., Freire, 2004; Picanço, 2012).

My point here is that there is still much to develop in terms of research in language teaching, focusing on the region. It seems that there is an opening for future projects which can engage the teaching community by stimulating research practices. Thus, this thesis aims to bridge the existing gap in research into EFL teaching in Amazonas, especially in relation to the themes which underpin the current study (teacher cognition, classroom interaction and narrative studies).

1.4 Aspects of the Brazilian educational system: language teaching in public and private schools

This study considers two contexts in which English is taught as a foreign language. One is the language school, here referred to as a “Private English Course (PEC)” (Barcelos, 2008) and the other is the public access school. The former refers to a fee-paying institution whose main goal is to teach English as a foreign language. The latter relates to the state public school system where foreign language education is mandatory in the curriculum (Brasil & MEC, 1996). A public school is a free of charge institution, managed by the State or the City – it resembles the State school system in the United Kingdom.

All the participants in this study live in Manaus and have access to good quality education. However, the geography of the region limits teachers’ access to in-service training in the capital and certainly that to those who live in remote areas of the State. For instance, the main teacher development events such as national and international seminars and conferences are usually only offered in major centres in the south-east and south of the country. Thus, teachers’ further education has become both expensive and limited for most who live in Amazonas. Although the Board of Education asserts that English teachers need to have a degree in the field to be able to teach (especially in public schools), it is common sense that there is still much to improve in regard to teachers’ proficiency and up to date (re)training in those remote regions (Silva et al., 2010).

All Brazilian schools are regulated by specific educational regulations (Brasil & MEC, 1996, 2006) and it is guaranteed by the Constitution that all students have “basic education, mandatory and free, including those who did not have access to school at the proper age” (Brasil, 1988, § I). In the case of foreign languages, such as English, it is only mandatory from the fifth grade of the primary education to the third grade of the secondary education. However in the *schools of excellence* foreign language is offered from the first grade. In brief, a school of excellence is the public institution which offers full day activities to students. Natalia, Teresa, Barbara and Nina have worked in this type of school.

In the public school system, language teaching is subject to government regulations which were renewed in the 1990s and later in the 2000s (Brasil & MEC, 1996, 2000, 2001, 2006). However, not much has changed in the general conditions of Brazilian schools from before the amendments to the present. Teachers still have crowded classrooms with around 40 to 50 students per class (Bezerra & Farias, 2010) and for English there are “at most two classes a week of 50 minutes each” (Menezes & Barcelos, 2008). This situation also gives the idea of “school English,” or low-quality English learning, discussed by Miccoli (2008).

Despite these conditions, the educational regulations demand that foreign language teaching should have a “communicative function,” prioritize “reading and comprehension of verbal and written texts” (Brasil & MEC, 2006), and reading should be “the main skill to be taught and learned” (Gil & Gimenez, 2008, p. 32). Considering the crowded classrooms and the short

class time, it seems hard for teachers to effectively achieve the regulations goals.

In the PEC, English is the main subject and as an “open course”, as it is referred to in federal guidelines (Brasil & MEC, 1996, 2004), it sometimes follows different regulations from those of the public school. The PEC considered in this study follows very specific demands to maintain the level of EFL teaching and learning. It offers ongoing training to teachers, it requests high academic knowledge, and expects teachers to have good levels of language proficiency in order to follow good quality teaching patterns.

1.5 Research aims and questions

This thesis aims:

1. To understand teachers’ own conceptualisation of classroom interaction as expressed in their narratives.
2. To investigate how teachers articulate their knowledge of classroom interaction in narratives.
3. To develop and inspire new models of narrativised cognition to improve the understanding of language teachers’ mental processes.

In addition, the study aims to respond to three main questions:

- *What are teachers’ own conceptualisations of classroom interaction in relation to their context and experience*?
- *How does teacher knowledge influence the understandings of language teacher cognition in teachers’ narratives*?

- How do English teachers articulate cognition of classroom interaction in their narratives?

I argue that a combination of factors, such as knowledge, experience, and context, help build each teacher's individual articulation of teacher cognition and influences both their style of storytelling and their conceptualisation of classroom interaction. This argument can be influential to the general understanding of language teachers' mental processes and ideas of classroom interaction, as well.

1.6 Significance and justification of the thesis

This study is important because it investigates English language teachers' practice in the light of three relatively new concepts in language teaching: narrative, teacher cognition and classroom interaction. In recent years, these concepts have received attention in academic discussions and created opportunities to draw new interpretations. In view of this educational opportunity, this study seeks to understand the nature of these underpinning ideas.

This research is also significant for its epistemological and ontological standpoints which are built upon the idea that knowledge is co-constructed both individually and socially, and multiple realities can be accepted at a given point in time. Related to the three underpinning ideas mentioned above emerges a socio-cultural view of learning emerges which regards language

learning as a social construction. Thus, there is a resonance with the ideas of teacher cognition, classroom interaction and narrative enquiry.

The current study is also important for its interest in the Amazonian context and for the possibility it brings to generate new questions about the EFL classroom, teachers' mental lives, narrative enquiry, PECs and public schools in Manaus, and, in general terms, Brazilian educational research. In language teaching research, some new and old ideas do not apply to all contexts and need to be investigated in a new light to re-build new conceptual references. This is an investigation that has potential to bring new outcomes, or at least suggest meaningful changes in the field.

1.7 Structure of the thesis

The study is organised in eight chapters:

Chapter 1 (above) offers the background and the catalyst of this research. It also brings an overview of the educational setting in which the participant-teachers operate. This initial introduction referred to what teachers' background knowledge and practice are originally built upon.

Chapter 2, explores the literature review of three important themes for this study: teacher cognition, classroom interaction, and language teacher education. It looks at the interrelation between these areas and the nuances of language teachers' praxis.

Chapter 3 introduces narrative enquiry as the research methodology and shows its connections to the concepts studied in the previous chapter. It discusses the nature of narrative and gives its background relationship to both the sociolinguistic and literary fields.

Chapter 4 offers details of the research design explaining how the data were gathered and analysed. It also considers the ethical procedures and research instruments used.

Chapters 5 and 6 present the systematic analysis of the data from both contexts: private and public schools.

Chapter 7 offers a discussion of the main themes which emerged from the results in the light of the underpinning literature. From this discussion, I propose a model of narrativised cognition of classroom interaction which emerges from this research process.

Chapter 8 brings the main conclusions about the research, reflections on the research process and ideas about the dissemination of the current study.

2 Reviewing language teacher cognition, classroom interaction and reflective teaching practice

2.1 Introduction

In this chapter I present the literature review of the main ideas upon which built my understanding of the conceptualisation of teacher cognition and classroom interaction in language teaching. I consider that language teaching and learning is constructed individually and in groups as suggested by the socio-cultural theory and that the idea of teacher cognition resonates with the epistemological stance of this study, which investigates teachers' minds to reach meaningful interpretations of classroom interaction.

At a time of student-centredness, this thesis looks at the *teacher* as a key character who plans, elicits, guides and monitors interaction in the language classroom. However, it is on teachers' own understanding of what classroom interaction represents in their practice that this study wants to focus. Also, the current study is interested in the ways teachers from Amazonas create interactive opportunities for their students to learn based on what they consider to be meaningful interaction. In addition, the review offered in this chapter also discusses related topics such as reflective practice and language teaching.

The chapter is organised in the following ways. Section 2.2 explores the conceptualisation of teacher cognition as it is considered for the development

of the current study. Section 2.3 investigates the notion of classroom interaction according to the key literature in the field and from the perspective of socio-cultural theories, in order to facilitate the analysis of teachers' own perspectives of the topic. Section 2.4 offers an introduction to ideas related to language teacher education – reflective teaching, teacher experience and teacher praxis. Finally, Section 2.5 discusses and summarises the relationship between the previous sections of this chapter and shows how these ideas inform the present study.

2.2 Understandings of teacher cognition: what teachers know, think, believe, and decide

This section offers a review of the different understandings of teacher cognition and its development in language teacher education. My initial perception of teacher cognition from the literature is that it is not grounded in concrete constructs. This leads to a complex notion of the term, which is explored in the next section. I argue that part of this variety of understandings relates to the numerous constructs of teacher cognition which have been included in its development as an important research area. In this study, as mentioned, four main constructs are considered and explained in the following sections – knowledge, thought, beliefs, and decision-making.

The choice of these four constructs is for three main reasons. First, in the search for a conceptualisation of language teacher cognition, these four constructs offered a coherent representation of the concept for the purpose

of this study. In the literature, they also appeared to be the main constructs for describing teachers' mental processes discussed in terms of language teaching research. Second, in my interpretation, throughout the research process, these constructs represented the basis of teaching, or the mental processes which generate action and behaviour in the classroom. Finally, although some connections are made between some of the four constructs in the literature, no work focuses on all four at the same time in the ways that this study does. Thus, this thesis offers a discussion not only of the four constructs mentioned above, but also of combinations of the four as they occur in teachers' narratives about their actions and behaviour in the classroom and their interaction with students.

Studies of teacher cognition have been developing in language teaching and teacher education for over two decades (Borg, 2012). In the current study, the works of Borg (in particular 2006, 2011, and 2012) are considered as key in the development of the conceptualisation of language teacher cognition. However, there is still much to enquire about this relatively new theme in the area of teacher cognition.

However, research developed around the world has been adding new perspectives to the field (e.g., Barcelos & Vieira-Abrahão, 2010; Feryok, 2010; Gaitas & Martins, 2015; Gürsoy, 2013; Moradan & Purasadollah, 2014) – see also Table 2.1 in Section 2.2.1. Thus, in order to understand teacher cognition for the purposes of this study, I present a review of the research developed in the field of English language teaching (ELT). The works of Borg (e.g., 1998, 2003; 2006), Woods (e.g., 1996; 2009), Burns et al. (2015),

Pajares (1992), among others form the basis of my discussion. My conclusion about teacher cognition is that it cannot be only studied by itself alone, but only in a combination with a meaningful focus such as classroom interaction, for instance. Later, in Chapter 8, I propose that teacher cognition should be specified as *teacher cognition of + a focus* in order to consider the different nuances of the theme. Next section offers a view of initial and current research on teacher cognition in different areas, but all concerned with ELT.

2.2.1 The tradition and development of teacher cognition research: from Psychology to English Language Teaching

Teacher cognition has its origins in psychology, in the cognitive studies. Considered as a "multidisciplinary field," cognitive science started within psychology, but soon was affecting, and being affected by the research developed in other areas such as linguistics, anthropology, neuroscience, among others (Radvansky & Ashcraft, 2014, p. 2). This multidisciplinary approach can be seen in Clark's (2014) study in which he relates the philosophy of cognitive sciences to perceptions, language, artificial intelligence, as well as the invisible and unobservable nature of the mind (2014, p. 3). He asks, "Why is that treating each other as having beliefs, hopes, intentions, and the like allows us successfully to explain, predict, and understand so much daily behaviour?" (ibid.). I take the position, from the review presented in this section, that discussing cognition is in fact deliberating about the unobservable constructs of the mind which are often the precursors to actions. From the psychological view, the mind in effect

generates multiple perspectives. Consequently in psychology, the idea of cognition is usually perceived as a complex term. It can also be construed as "the collection of mental processes and activities used in perceiving, remembering, thinking, and understanding, as well as the act of using those processes" (Radvansky & Ashcraft, 2014, p. 6). This interpretation, as seen later in this section, resonates with the literature in the educational sphere, which adopts a similar stance to this topic.

In educational research, the multiple and multi-layered processes involved in cognition are then analysed focusing on teachers' minds and actions. Thus, cognitive studies come together with teaching and teacher education, conceptualising *teacher cognition* (Borg, 2006). From this aspect, cognition is related to the understanding of teacher practice and the ways teachers "make sense of their work" in terms of "thoughtful behaviour" (ibid., loc. 52).

The development of the studies about teacher cognition can be traced back to the early 1970s (Education, 1975). Borg (2006) explains that a report of the National Institute of Education in the United States started a tradition of studying teacher cognition when they claimed that teachers should be seen as "active, thinking decision-makers," expanding the previous, limited conceptualisation of teachers and teacher cognition (ibid., loc. 71). After this US report, the perspectives of teacher cognition mainly related to teachers' knowledge, behaviour, and thoughts about their practice (ibid.). This report (Education, 1975) also shows concern for teachers' mental lives, thoughts, decisions and behaviour, as well as "improving understanding of the ways in

which teachers cope with the demands of classroom life as a basis for the improvement of teaching" (ibid., p. 51).

As seen in the literature in the fields of teacher cognition, teacher development, and so on, this idea of teachers as active decision-makers is regarded as a meaningful conceptual shift. In my practice, I see how teacher training has shifted from "bench-sitting" instruction (Freire, 1987) to round-table discussions. Today, in teacher development programs, teachers (or student teachers) are being empowered to take part in the process of their development instead of being spoon-fed in a top-down approach. Thus, learning is taken to be a social, interactive practice.

Key bibliographies on educational topics refer to studies of both teacher cognition and its constructs. For instance, Clark and Peterson's (1986) review of the literature concerning teachers' thought processes, which remains an important source for the understanding of this construct (refer to Borg, 2006 for details; Burns et al., 2015).

Teachers' thinking was also explored by Dewey (1910, 1933), as well as teachers' knowledge and experience (ibid., 1916; 1938). In Dewey's time, thinking, knowledge, and experience were not yet treated as constructs of teacher cognition. However, his writings are timeless references for research in Education. The present study, for example, is inspired by Dewey's view that teachers are constantly and actively building their understandings of teaching and learning meaningfully – a modern view for his time (see, Dewey, 1916). Another link between constructs is made in Schön (1987,

1995) who relates knowledge and thinking in his writings on reflective teaching (see Section 2.4 for details of reflective thinking).

The conceptualisation of knowledge, has been investigated at length in relation to teachers' mental lives. For instance, Elbaz's (1981, 1983) studies of *practical knowledge* have influenced meaningful research in this area, underpinning the notion of teachers' *personal knowledge*, and later of *personal practical knowledge* (PPK), as investigated in depth in the works of Connelly and Clandinin (e.g., Clandinin & Connelly, 1987; Connelly, Clandinin, & Fang He, 1997), Golombek (e.g., 1998, 2009), and Morton and Gray (2010). All these perspectives influenced the conceptualisation of knowledge presented in this thesis (see Chapter 7). In Section 2.2.2 I return to the understanding of knowledge as a construct of teacher cognition.

Around the mid-1990s, teacher cognition started to be explored in relation to language teaching (Burns et al., 2015; Woods, 1996). Since then, its conceptualisation in ELT has acquired new understandings, new perspectives and new constructs. In the literature of the field, teacher cognition is construed through its relationship to teacher's mind, thinking, decisions, and knowledge (e.g., Barnard & Burns, 2012; Borg, 2012; Burns et al., 2015). There are also connections to teacher's practice and experience and what teachers believe, do, and decide (e.g., Barcelos & Vieira-Abrahão, 2010; Gebhard & Oprandy, 1999; Johnson, 1994).

Hence, it is possible to conceptualise teacher cognition in relation to the notion of a teacher's mental processes through the study of its constructs. For example, in Borg's explanation presented below, teacher cognition

> can thus be characterized as an often tacit, personally-held, practical system of mental constructs held by teachers and which are dynamic – i.e. defined and refined on the basis of educational and professional experiences throughout teachers' lives. (Borg, 2006, loc. 434)

I interpret these "mental constructs," cited above, as an array of ideas, information or experiences embedded in teacher cognition but constantly evolving and see "teachers' lives" from a comprehensive standpoint to include teachers' practice, their personal and professional lives, experience, knowledge, among other facets. From this perspective, I understand teacher cognition as the interrelation between practice and action and behaviour, and the representation of the mind as being behind the actions, as suggested by Clark (2014). I conclude that teacher cognition not only investigates teachers' behaviour, but also deals with what is in the mind of the teacher before, during, and after an action, or their "thoughtful behaviour" as seen in Borg (Borg, 2006, loc. 70).

In the literature, the conceptualisation of teacher cognition developed gradually. First, the studies mainly focused on individual constructs of teacher cognition such as beliefs (Barcelos, 2008; Kalaja & Barcelos, 2003; Pajares, 1992), thought (Clark & Peterson, 1986), decision-making (Woods, 1996), knowledge (Ben-Peretz, 2011; Freeman, 1996; Szesztay, 2004), among other researchers. Teacher cognition thus became a broad term encompassing all the above.

For example, in his seminal work on the theme, Borg (2006) explores the idea of teacher cognition more specifically in connection with language teaching. His works in this area influenced further research, which drew

attention to the complexities of the concept of language teacher cognition (Feryok, 2010), language teachers' beliefs (Debreli, 2012), and language teaching in general (Barnard & Burns, 2012; Woods & Çakır, 2011).

Thus, my understanding is that teacher cognition is dynamic, constantly under construction, and according to the perspective from which it is studied, it can generate new interpretations. In other words, although the various constructs of teacher cognition (e.g., knowledge, beliefs, experience, and others) have been studied before in relation to language teaching, when combined, they build a new sense of the term *teacher cognition*. Thus, teacher cognition becomes an umbrella term which can include all or some of its constructs.

The constructs of teacher cognition have been studied either individually or in combination with other constructs, from different perspectives and with distinct purposes. For example, in Brazil, Barcelos and Vieira-Abrahão (2010) organised a series of reports of investigations into teachers and students' beliefs in relation to EFL teaching and learning. They considered the contextual influences of such beliefs and proposed reflections about the themes they explored. Also in Brazil, Miccoli (2008) examined teachers' experience in private and public schools problematizing the idea of *school English*, that is, low-quality English teaching because of the use of the mother tongue, Portuguese in English classes. Both works are highly relevant as they study teacher cognition in Brazilian contexts which are similar to the settings explored in this study.

Some of these points of view are discussed in the next sections in relation to teacher cognition and the four constructs mentioned above. For all four constructs I outline the main assumptions which generate the conceptualisation of the construct and locate the *domain* to which they belong. Here, the term domain refers to the individual or community sphere which the construct affects (or is affected by) when studied.

Table 2.1 below shows a reference list which discusses teacher cognition in its all-encompassing sense or its constructs in relation to EFL teaching and learning. Most of the titles are discussed throughout this section on teacher cognition, but they are shown here as an overview of Brazilian and international trends in language teacher cognition research, in terms of methodological approaches and the constructs explored.

Table 2.1 Research on language teacher cognition

Source	Context	Perspective	K	T	B	D	other constructs	Topic
Brazilian context								
1. Battistella & Lima (2015)	Brazil	socio-cultural study			●			FL
2. Bedran & Salomão (2013)	Brazil	observation of *teletandem programme*			●			EFL
3. Aragão (2011)	Brazil	longitudinal case study			●		+ Emotion	FLL
4. Barcelos & Kalaja (2011)	Brazil	review			●		+ Experience	SLA
5. Aragão (2008)	Brazil	narrative enquiry					→ Emotion	EFL
6. Miccoli (2008)	Brazil	narrative enquiry					+ Experience	EFL
7. Barcelos (2007b)	Brazil	students and teacher's beliefs			●			EFL
8. Barcelos (2006)	Brazil	narrative enquiry			●		+ Experience	EFL
9. Aragão (2005)	Brazil	narrative enquiry			●		→ Emotion	EFL
10. Barcelos (2001)	Brazil	review on methodologies in the study of beliefs			●			EFL
International context (other countries)								
11. Moradan & Purasadollah (2014)	Iran	how teachers think		●	●		+ attitude	TEFL
12. Gürsoy (2013)	Turkey	teachers' behavior, beliefs			●			LL / LT
13. Debreli (2012)	Cyprus	qualitative			●			EFL
14. Erkmen (2012)	Cyprus	qualitative			●			EFL
15. Mori (2011)	Japan	corrective feedback practices	●		●			EFL
16. Feryok (2010)	Armenia	complex systems in EFL					●	EFL
17. Barkhuizen & Wette (2008)	China	narrative enquiry – frames					+ Experience	EFL
18. Szesztay (2004)	Hungary	teacher education	●	●		●		ELT
UK and USA								
19. Freeman (2013)	USA	case study		●			+ learning and identity	ELT
20. Borg (2011)	UK	longitudinal study			●			ELT / TE
21. Morton & Gray (2010)	UK	discourse of shared lesson planning	●				PPK	TESOL
22. Golombek (2009)	USA	comparative study	●				as PPK	L2 TE / ESL
23. Borg (2003)	UK	rreview	●	●	●			EFL
24. Freeman & Johnson (1998)	USA	knowledge-base of LT education	●				as PPK	TESOL
25. Golombek (1998)	USA	class observation, interview, stimulus recall	●				as PPK	ELT

Key: + = also; → = only; as = approach
K = knowledge; T = thought; B = beliefs; D = decision-making
See list of abbreviations for the topics

In Table 2.1 above, the first column represents the source (authors and publication year), organised in chronological descending order. The second column refers to the context in which the research was developed. The context is divided into three groups. The first group relates to the Brazilian EFL context; the second refers to countries where English is not the first language; and the last relates to research developed in the UK and the USA.

The *perspective* indicates the main methodology or approach to the theme. Then, the four main constructs of teacher cognition explored in this thesis are represented by the single letters *K* (Knowledge)*, T* (Thought)*, B* (Beliefs)*,* and *D* (Decision-making). The column called *other constructs* represents any other constructs of teacher cognition treated in the journal articles (see the key at the bottom of the table for details of symbols used). Finally, the last column presents the language topic referred to in the paper, such as EFL, TESOL, SLA, etc. (for acronyms see List of Abbreviations on page xxii).

As seen from the titles in Table 2.1, beliefs and knowledge are the most explored constructs in the research papers or book chapters. The Brazilian references, for example, present a focus on beliefs as the main focus of research, followed by experience and emotion. In the countries where English is not the first language, beliefs and knowledge also represent the main foci. Finally, in the UK and USA traditions, there is a shift to knowledge. Table 2.1 above presents a sample of the trends in research into teacher cognition in Brazil and other countries. The review in the following sections gives details of the constructs explored in these referenced works.

2.2.2 Conceptualisation of language teacher knowledge

The idea of *knowledge* here explored refers to the language teacher and makes several assumptions: knowledge is considered a cognitive process or a mental construct (Borg, 2006). It means to be aware of or understand a topic (Dewey, 1938). It can be generated from education – formal or informal learning – or experience, but can also help improve both. It relates to practical and theoretical information (Elbaz, 1981, 1983). It belongs to the personal and the community domains (Morton & Gray, 2010).

Further, interest in teacher knowledge has been increasing since the mid-1980s and became "part of a revolution in how educators think about classroom practice" (Connelly et al., 1997, p. 666). This shift in educational research marks the time when further discussion about teacher knowledge was stimulated. The literature offers several types of knowledge, such as personal practical knowledge (Connelly et al., 1997; Golombek, 1998), personal knowledge (Clandinin & Connelly, 1987), professional knowledge (Clandinin & Connelly, 1995), content knowledge (Borg, 2006), knowing-in-action (Schön, 1987), among others.

In order to understand the conceptualisation of knowledge which resonates with this thesis, I draw on influential works about related topics such as Dewey's (1910, 1916, 1933) knowledge and experience, Schön's (1987) "knowing-in-action," Elbaz's (1983, 1991) "practical knowledge," Clandinin and Connelly's (1987, 1995) "personal practical knowledge" (or PPK), and so on. Later in this section I return to these concepts.

The interrelatedness of the constructs of teacher cognition identified in the previous section should also be noted when studying *knowledge*. Clandinin and Connelly (1987), for example, identify associations between action and thought, prior experience and knowledge, cognitive and affective evidence (pp. 496-497). In their work, knowledge and experience are recurrent topics when analysing the concept of teacher cognition. Szesztay (2004) suggests that teacher knowledge cannot be limited to formal or academic-related thoughts, but includes the relation between decision-making, beliefs and reflection. As it can be noted throughout this chapter, the constructs are in fact discussed, in interrelated patterns, in the literature of the field.

Hoy et al. (2006) analyse teacher knowledge and beliefs, demonstrating that in general, knowledge is "seen as more factual whereas beliefs tend to be subjective and [do] not require validation," but they are seen as "generally overlapping constructs" as are so many others (pp. 715-716). Hoy et al. present three types of teacher knowledge: *professional knowledge*, related to the pedagogical content knowledge; *propositional knowledge*, associated with problem-solving and psychological issues; and *practical knowledge*, linked to teachers' routines and everyday life knowledge (p. 717).

Elbaz (1983), in a study of teachers' knowledge, relates it to thought, experience and practice. He introduces his work saying that "teachers hold a complex practically-oriented set of understandings which they use actively to shape and direct the work of teaching" (ibid., p.3). This practical aspect of teacher knowledge, as Elbaz presents it, has close connections with the teacher (as actor) as well as teaching methodology, subject-matter and

curriculum (passim). In Chapter 7 I return to the conceptualisation of knowledge.

In a review of nine papers about knowledge (e.g., Buitink, 2009; Clarke & Hollingsworth, 2002; Connelly et al., 1997; Edwards & Ogden, 1998; Gorski, 2009; Grossman & Richerrt, 1988; Holden & Hicks, 2007; Tamir, 1991; Ye Fan Tang, 2003), Ben-Peretz (2011, p. 8) concludes that when referring to teacher knowledge, most researchers centre their definitions on specific themes such as “subject matter” and “instructional competencies.” Ben-Peretz lists at least six different types of teacher knowledge: personal practical knowledge, professional knowledge, curriculum subject knowledge, content knowledge, pedagogical knowledge, and pedagogical content knowledge (ibid.). In other words, the idea of teacher knowledge discussed in Ben-Peretz (2011) involves much more than knowing the content or the function of the work of a teacher, it also carries an unobservable set of requirements, rules, and experiences which allow the teacher to make use of such content in the classroom.

Similarly, this inclusive perspective of teacher knowledge is seen in Shulman (Shulman, 1986, 1987, 2004) and Shulman and Shulman (Shulman & Shulman, 2004), who understands that a teacher’s knowledge base could include several categories. He lists seven, four of which overlap with Ben-Peretz’s categories: *content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners, knowledge of educational contexts, and knowledge of educational ends* (Shulman, 1987, p. 8), but puts the main focus on the *pedagogical*

content knowledge because, in his view, it combines teachers' specialist knowledge with their pedagogical perspective (ibid.). Consequently, the literature indicates that teacher knowledge involves the many attributes of the teaching profession (e.g., academic, content, practical, professional, personal knowledge, among others), including both professional and personal aspects and making experience an important element in the understanding of personal practical knowledge (PPK) discussed in detail in Chapter 7.

Thus, this study uses different perspectives to understand the idea of knowledge is or can be. For example, in Dewey's view knowledge comes from experience and they are developed together (Dewey, 1916). Schön's notion of "knowing-in-action" could then become "knowledge-in-action" and subsequently "reflection-in-action" (Schön, 1997, p. 59). Elbaz's understanding is that knowledge is practical in terms of experience, but also personal in relation to the individual teacher as the expert in what she does (Elbaz, 1983). Finally, Clandinin (1986) adds the personal to the practical by investigating individual orientations in teachers' thought, practice and (of course) knowledge. Thus, for the purpose of this study, knowledge is also considered as personal practical knowledge (or PPK) in the sense that it relates knowledge to experience (individual and contextual); it refers to the *knowing-in-action* (but is not limited to it); and it accepts that knowledge is practical, but the individual influences from a teacher's life cannot be separated from her practice.

The analysis (presented in Chapters 5 and 6) illustrates the many factors that can be considered as evidence of PPK for the purpose of this study, and in

the discussion (Chapter 7), the importance of knowledge as PPK for the results of this study is discussed. That can be the case when the teacher uses a metalanguage, for instance. In simple terms, metalanguage is the technical language used by teachers and learners to talk about or describe the English language and about learning and teaching (McCarthy & Carter, 1994). This topic is discussed in details throughout the analytical chapters (5 and 6).

2.2.3 Representation of teacher thought processes

The notion of *teacher thought*, or *thinking* (henceforth interchangeable terms), which this study considers, makes to the following assumptions: It denotes a mental construct of which we are conscious (Dewey, 1910, 1933). It can refer to "everything that, as we say, is 'in our heads' or that 'goes through our minds'" (Dewey, 1910, loc. 104). It relates to "teacher planning, teacher judgement, teacher interactive decision-making (…), and teachers' implicit theories or perspectives" (Borg, 2006, loc. 90). Thinking belongs to the individual domain, but can be influenced by external causes.

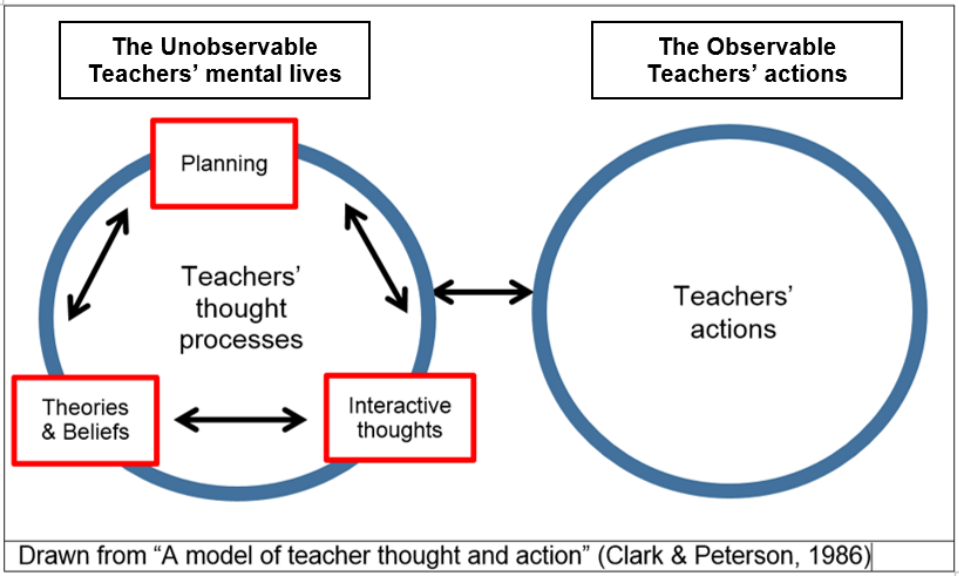
From the works on teacher cognition here reviewed, Clark and Peterson (1986) offer an elaborate explanation of how research has explored the construct. In a seminal review about research on thought processes, they say:

> The thinking, planning and decision making of teachers constitute a large part of the psychological context of teaching. It is within this context that curriculum is interpreted and acted upon; where teachers teach and students learn. Teacher behaviour is substantially influenced and even determined by teachers' thought processes. (Clark and Peterson, 1986, p. 255)

It can be seen from the excerpt that the idea of “teachers’ thought processes” relates to other mental constructs (planning, decision-making, judgement, and learning) and to action (teaching and behaviour). This interrelatedness to other constructs resonates with the view this study takes about *teacher thought*, that is, it is not a complete representation of what is in the teachers’ minds until it finds a link to other mental constructs.

The abstract nature of thought is also discussed in Clark and Peterson (1986, p. 257), who created a model (Figure 2.1) to illustrate the relationship between the “unobservable” (thoughts) and the “observable” (actions) domains. They classify the unobservable (teachers’ thought processes), into three main categories: “teacher planning,” “interactive thoughts and decisions,” and “theories and beliefs” (ibid., pp. 257-258). Clark and Peterson (1986) argue that teachers think while planning and they make decisions during and after planning. The theories and beliefs teachers have can influence their thoughts and, consequently, their actions. The authors conclude that “thinking plays an important part in teaching” and planning, decision making, beliefs, and theories can influence teachers’ actions (ibid., p. 292). Figure 2.1 below is an adaptation of Clark and Peterson’s (1986, p. 257) model of “constraints and opportunities.”

Figure 2.1: Relationship between teacher thought and action



Drawn from "A model of teacher thought and action" (Clark & Peterson, 1986)

In Figure 2.1 above, the interrelatedness of the observable and the unobservable domains is, in fact, a cause-effect condition because "teachers' actions are (…) caused by teachers' thought processes, which then in turn affect teachers' actions" (ibid., p. 258). Clark and Peterson suggest that in order to understand teachers' mental processes, or the *unobservable*, a researcher needs to use effective strategies and techniques such as thinking aloud, stimulated recall, policy capturing and journal keeping, among others (p. 259). When analysing teachers' narratives, I believe that the relationship between thought processes and action can emerge in teachers' voices.

A similar cyclical relationship between thinking and action is referred to in Clandinin and Connelly (1987). They show an interdependent relationship whereby teacher thought can direct action and action can direct thought. In their view, this relationship can lead to the understanding of personal knowledge. Clandinin and Connelly (1987, p. 498) also present three

components of teacher thought – “practical actions, biographical history, and thoughts,” adding to the cyclical relation between thinking and action.

Thought has also been associated with the notion of reflection. Dewey (1910), for instance, understands reflective thinking as a “random coursing of things through the mind in that it consists of a succession of things thought of” (ibid., loc. 109). Schön (1987, loc. 357), relates reflection, thought and knowledge to the same processed of knowing-in-action and knowing-on-action.

As mentioned in Section 2.2.1, the literature suggests that there is an association of constructs. For instance, Borg (2006, loc. 89) studies thought in association with “teacher planning, teacher judgement, teacher interactive decision-making (…), and teachers’ implicit theories or perspectives.”

This interconnection between the constructs resonates with the views of Dewey (1910), Clark and Peterson (1986), Clandinin and Connelly (1987), Schön (1987), and Borg (2006) that thinking and action have an interdependent relationship. Thus, the notion of teacher thought which resonates with the purposes of the current study refers to the interconnection between the non-observable and the observable, that is, the mental processes (thinking, planning, deciding) which generate and influence action (teaching and doing) and reflection (re-thinking about the teaching process). Chapters 5, 6 and 7 also explore the conceptualisations of thought.

2.2.4 Understandings of teacher beliefs

The view of *teacher belief* which is investigated in this study makes various assumptions. It relates to mental processes which can be affected by knowledge and contextual influences. It denotes “social (but also individual), dynamic, contextual, and paradoxal” constructs which have a cyclical nature (Barcelos, 2010, p. 18). We can also consider that to believe implies to feel right or knowledgeable about the topic – even if it is not (exactly) the way one think it is. There is a close relationship between teachers’ beliefs and their practice (Borg, 2006). Beliefs belong to both individual and group domains, that is, one person can have his own beliefs about a theme and have shared beliefs with a group.

As with the other mental constructs, the idea of beliefs has an abstract nature and, in the literature, this construct is frequently represented by a great number of meanings and in close relationship with the other constructs of teacher cognition. The interrelatedness to other constructs also applies to the notion of beliefs. This view is well represented in one of the descriptions offered by Pajares (1992, p. 313).

> That beliefs are studied in diverse fields has resulted in a variety of meanings, and the educational research community has been unable to adopt a specific working definition. (…) beliefs are seldom clearly defined in studies or used explicitly as a conceptual tool, but the chosen and perhaps artificial distinction between belief and knowledge is common to most definitions. Belief is based on evaluation and judgement; knowledge is based on objective fact.

Today’s descriptions are not very different in terms of the inconsistency that surrounds the construct. In Pajares’ (1992, p. 316) opinion, “judgement” is closely related to the idea of beliefs. However, he also lists twenty-one other

constructs which relate to the various meanings of beliefs, or to the "belief system." They are:

> attitudes, values, judgments, axioms, opinions, ideology, perceptions, conceptions, conceptual systems, preconceptions, dispositions, implicit theories, explicit theories, personal theories, internal mental processes, action strategies, rules of practice, practical principles, perspectives, repertoires of understanding, and social strategy. (Pajares, 1992, p. 309)

This study adopts, to a degree, the inclusive view of beliefs presented by Pajares above. However, the current study focuses on the idea of teacher beliefs, which implies what Pajares calls *educational beliefs* (Pajares, 1992, p. 316), teachers' personal beliefs, community beliefs, professional beliefs, among other types of beliefs.

Richards (1998, p. 66), also offers a list of related constructs related to beliefs: "information, attitudes, values, expectations, theories, and assumptions about teaching and learning." This range of meanings creates a multifaceted construct, making it appear more abstract than the other constructs.

Nonetheless, the EFL literature reviewed shows that the conceptualisation of beliefs has been developing gradually and its relationship to other constructs only adds to its own conceptualisation. For example, Aragão (2011) links beliefs and emotions in a study which explores second language acquisition (SLA). He explains in his conclusions that emotions such as *embarrassment* and *self-esteem* "interact with core beliefs and this relationship plays a fundamental role in the way students behave in their learning environment" (ibid., p. 311). In the present study this type of relationship of beliefs to any

other constructs could arise in the analysis emerging from the teachers' narratives.

Because *beliefs* have a complex nature, as do the other constructs, in research there is a growing interest in the ways they can affect teachers' practice. For instance, in a review of research into "language teachers' stated beliefs and practices," Basturkmen (2012, p. 282) suggests that the relationship between changes in teachers' behaviour in their practice and "changes in their thinking and beliefs" (p. 283), is more evident in the case of experienced teachers and when "planned aspects of teaching" are involved (pp. 287, 291).

In the Brazilian educational field, *beliefs* have become part of the tradition in the study of teacher cognition (see Section 2.2.1). Barcelos (2010), for instance, investigates the ways in which beliefs affect teachers' practice. She looks at the conditions which create changes in beliefs and practice, as well as the impact of teacher education on these changes (ibid., passim). Barcelos states that the study of beliefs has been growing as an important area of research in Brazil since early 1990s, but there is still much to investigate in this context (Barcelos, 2007a, 2010; Kalaja & Barcelos, 2003).

From the views of *teacher beliefs* presented above emerges the conceptualisation of teacher beliefs which resonates with this study – those which involve teachers' practice and teachers' knowledge. In addition, in this study, beliefs, where appropriate, can also refer to other mental processes (such as opinions, attitudes, emotions, theories, perceptions, judgments, etc.) which can affect teachers' practice. For the purpose of the present study, the

term *beliefs* is expressed in the plural because it is my understanding that this represents the encompassing characteristic of the construct. Later in the analysis and discussion, I revisit the idea of beliefs.

2.2.5 Interpretation of teacher decision-making

The understanding of *teacher decision-making* explored in this study refers to the following assumptions. It relates to a cognitive process which usually results in action or behaviour. In terms of teaching and teachers' practice, it involves three main points in time – before, during and after a lesson has taken place (Richards & Lockhart, 1996). Teacher decision-making belongs to an individual domain, but sometimes decisions are made *for*, *because* or *with* the group or community.

Decision-making has been construed as the teachers' ability to find "an alternative routine or react interactively" to solve a problem (Richards, 1998, p. 76). It has also been considered as part of the "teachers' thought process" which occurs at several stages of classroom activity. For Clark and Peterson (1986, pp. 258, 273), teachers' decisions can be made before, in the planning phase, or during interaction, in the classroom phase. These stages are referred to differently in other works, but most scholars agree that decisions are present in at least three phases: pre-, while, and post-classroom activities.

Richards and Lockhart (1996), for example, also understand that "teaching involves making a great number of individual decisions" (p. 78) which are made at different stages of the teaching process. Thus, in the pre-lesson

phase, they categorised teachers' decision-making as *planning*, in the while- as *interactive*, and in the post-lesson phase as *evaluative* decisions (p. 78).

The terminology may change, but the basic understandings of this construct remains the same. For example, Bailey (2006, p. 269) uses other terms to identify the three types of decisions. She says, "*preactive decisions*, are made prior to teaching, as teachers plan their lessons," there are also after lessons decisions, and "*online*, or *interactive decisions*, are made during real time." Some decisions are observable and others are not. In the narratives it is possible to identify the decisions made when teachers articulate them.

Walsh (2006a, p. 130) considers teachers' overall decision-making as "methodological decision-making." The interactional nature of decision-making in a language classroom is because even if there is a plan, during the development of a lesson, new decisions are made based on students' actions and reactions. Therefore, the idea of "*interactional* decisions" refers to "the relationship between language used and teaching/learning outcomes" (ibid.). Teachers' methodological knowledge can also be understood by the ways it affects teachers' decisions before, during, and after the lesson.

Thus, the notion of teacher decision-making considered in this study refers to the mental processes developed by teachers which affect their classroom actions (before, during and after a lesson) and involve teachers' knowledge. For this study, interactional decisions are as relevant as planning and evaluative decisions as they appear in teachers' narratives. Later, Chapters 5, 6 and 7 offers the analysis and a discussion of the understandings of decision-making.

2.2.6 Drawing conclusions about teacher cognition and its constructs

As noted, the constructs of teacher cognition represent an intricate network of ideas. The four constructs explored in the previous sections have an interrelationship with other constructs. Thus, teacher knowledge, thoughts, beliefs, and decision-making represent the idea of teacher cognition which this research aims to approach. Therefore, the main assumptions this study considers about the four constructs in relation to teachers are:

- All four constructs represent teachers' mental processes developed inside or outside the classroom, but directed towards the classroom.
- The four constructs might generate teaching actions in terms of interaction with students and between students as narrated by teachers.
- Knowledge represents teachers' *awareness of* or *understanding of* something and can be used interchangeably with these terms. Knowledge also involves teachers' practice, experience, beliefs, thoughts and decisions.
- Thought relates to the conscious perception of an event. Therefore a teacher thinking about his or her practice means that he/she is aware of what may take place in the classroom but is not limited to it. Thought also includes judgement, planning, beliefs, decisions and knowledge.
- Beliefs refers to the judgements teachers make based on knowledge and experience. Beliefs involves planning, thinking, and knowing. Teacher beliefs imply that teachers' context, education, and experience have

weight in their thoughts which leads them to judge an action as right or wrong, effective or ineffective, and so on.

- Decision-making relates to teachers' thoughtful processes which can generate behaviour or actions. In terms of planning a lesson, decisions can involve pre-judgements, interactional choices and evaluative results, as well as individual assessments and institutional conditions. This process can also influence the next lesson.

By analysing teachers' narratives, it is possible to draw conclusions about their mental constructs and their interrelationship with each other and with classroom interaction, language teaching and teacher practice. The next section offers a review of the understandings of classroom interaction as observed in the literature.

2.3 Perspectives of classroom interaction in language teaching and learning

This section examines the background and the tradition of *classroom interaction* (hitherto interchangeable with CI and the term *interaction*) from the perspective of socio-cultural theories of learning. It presents a review of key works which have contributed to the conceptualisation of the theme. In brief, the idea of CI considered in this thesis refers to the interactive or collaborative opportunities which happens in the classroom to facilitate learning. It also involves related topics such as classroom discourse,

interactional and communicative competence and language teaching. (Brown & Lee, 2015; Canale & Swain, 1980).

The choice to focus on *classroom interaction* in the investigation of teacher cognition primarily relates to the basic notions of communicative language teaching (CLT) which have been the foundation of current language teaching and teaching education, especially in Amazonas (e.g., UFAM). CLT is discussed in detail in Section 2.3.2, but for the purpose of this introduction it can be described as an all-encompassing term which aims to meet communicative teaching and facilitate second language acquisition (SLA). In the current study, classroom interaction is therefore considered as inherent to CLT and closely linked to the socio-cultural theories. Brown and Lee (2015) claim that

> interaction is the basis of L2 learning, through which learners are engaged both in enhancing their own communicative abilities and in socially constructing their identities through collaboration and negotiation. (Brown & Lee, 2015, p. 80)

This view of interaction focusing on learners' engagement, collaborative work, and socially constructed knowledge, for example, resonates with the English course programme of a major Amazonian University. Its syllabus aims to produce English teachers with the communicative competence to work in both the private and public sectors (UFAM). This same understanding is expected from these future teachers to be reflected in their classrooms.

It can be inferred from this perspective that the participant teachers have from their academic experience at least the basic notions of CLT and CI. Therefore, from the analysis of their narratives it will be possible to interpret

how teachers' understandings of CI relate to their specialised conceptualisations here reviewed, to their academic and professional knowledge, and to their contextual conditions and needs. The following sections draw on the literature to establish a starting point for an interpretation of classroom interaction as constructed by teachers in their narratives.

The organisation of this section is as follows. First, Section 2.3.1 offers a brief history of CI tradition in language teaching. It also presents some of the recent research developed around the world (e.g., Jenks & Seedhouse, 2015) and the influence of socio-cultural theories on the studies of CI. Then, Section 2.3.2 examines the related research on CLT in Brown and Lee (2015), and Harmer (2001), Richards and friends (Richards & Farrell, 2011; Richards & Lockhart, 1996; Richards & Renandya, 2002), Nunan and Bailey (2009) among others.

Then, Section 2.3.3 studies the literature on CI and discourse in Walsh (2002, 2006a, 2011, 2013), Seedhouse (Jenks & Seedhouse, 2015; Seedhouse, 1996), McCarthy and Carter (Carter & McCarthy, 1997; McCarthy, 2002; 1994), Evison (2009, 2012, 2013), Young (2008), and others; and investigates the notion of communicative and interactional competence in Canale and Swain (1980),Young (2013), and Kramsch (1986), among others. Finally, Section 2.3.4 draws conclusions about the conceptualisation of classroom interaction this study wishes to adopt.

2.3.1 The conceptualisation of classroom interaction and the socio-cultural theory in English language teaching and learning

In this thesis, learning is perceived as (co-)constructed both individually and socially, and this idea resonates with the conceptualisation of classroom interaction. As seen in the previous section, when students participate, interact, act, and react in the classroom (with peers and/or the teacher) they are inserted in a social environment which represents the social nature of learning (Walsh, 2011). This perspective originates in the work of Vygotsky (1978) which has been influential in the studies related to the learning process.

In Vygotsky's view, interaction helps the process of learning which in its turn produces the zone of proximal development (or ZPD). He explains 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 achievement. (Vygotsky, 1978, p. 90)

In other words, the idea of ZPD is as a process of understanding and learning from the guidance and collaboration of an expert (an older child, an adult, a teacher, etc.). The interaction with this expert will develop a "process of maturation" (ibid., p. 86). According to Walsh (2011, pp. 63-64), the teachers' roles in this interactional and socio-cultural process should be that of a guide and supporter, among others, in order to create opportunities for the learners to "reflect and learn from the unfolding interaction".

In the case of this study, the teachers describe, define, and exemplify in their narratives, moments which they consider as being interaction in the language classroom. The idea of ZPD is inherent in the various collaborative moments which happen between teacher and students, and among students as narrativised by the participants of this study. From the teachers' perspectives, the relation between the socio-cultural nature of learning and the idea of interaction in the classroom seems to create a meaningful understanding of the process of teaching and learning a foreign language, especially during students' collaborations.

In language teaching, CI has become one of the key procedures in planning for effective language learning. This socio-cultural perspective has created awareness that the social nature of language could improve the efficiency of language learning. Several approaches and methods of language teaching have emerged within this perspective, for instance. This is the case of Task-based learning (TBL) and many other methods which emphasise the use of interaction (e.g., pair and group work) in the learning process (Brown and Lee, 2015).

An overview of studies of CI in ELT – its origins and developments – is offered in Jenks and Seedhouse (2015), for instance. They connect the first studies on CI to the advent of audio recording in the 1960s. The equipment made it possible to record, transcribe and analyse the learning processes which involved CI and start to develop it. Currently, CI has been growing in the interest of researchers all over the world, and has "coincided with the global spread of ELT" (Jenks & Seedhouse, 2015, p. 3).

Similarly to teacher cognition (see Table 2.1 in Section 2.2.1), international research into CI and related topics has been thriving. Some of the works which involve CI and also bring a global perspective include topics such as English-only policy and the influences of the organisation of CI (Amir, 2015), the use of technology in the EFL classroom (Li, 2015), mediated learning and CI (Lugendo & Smith, 2015), the relationship between CLIL (Content and Language Integrated Learning) (Urmeneta, 2013; Urmeneta & Evnitskaya, 2014) and language competence (Schwab, 2015). There is also global research focusing on the interactional competence of L2 learners of English and Spanish (e.g., Dings, 2014; Galaczi, 2014; Shively, 2015; Sun, 2014; Urmeneta, 2013). These papers can be seen as evidence of international EFL practice and its relation to CI research around the world. The current research contributes to it by bringing the Amazonian (and Brazilian) context to the field.

As mentioned in Section 2.3.1, the selection of *classroom interaction* as the main focus of this study is grounded (and perhaps triggered) by the guidelines for communicative language teaching (CLT) on second language acquisition (SLA) which stresses the "social, cultural and pragmatic features of language" (Brown & Lee, 2015, p. 31). These aspects of CLT have influenced modern EFL teaching and learning processes and have created a problem for this thesis. The problem generates a simple question: How do teachers offer meaningful interactive opportunities to learners and so meet CLT guidelines (Brown & Lee, 2015; Harmer, 2001) in specific contexts such as the Amazonian schools? I return to this question in Chapter 8.

This question also helped build the conceptualisation of CI in language teaching considered in the current study. Therefore, for the purpose of this study, the understandings of classroom interaction are here constructed in the light of CLT, discourse, socio-cultural theory, as well as communicative and interactional competence.

2.3.2 Communicative trends in language teaching and learning: interactional principles in the classroom

There are three main ideas to consider in the discussion of classroom interaction in language teaching and learning: classroom, interaction, and language teaching. Jenks and Seedhouse (2015, p. 3), for example, understand that the *classroom* is a place where simulations of real life to happen and involves (of course) social features (ibid.). These social aspects of classroom (and interaction) are pointed out by Young (2008, p. 154). He states that

> the classroom is one of the primary sites for social interaction in schools and, because it is public and because the classroom is considered to be the place where teachers teach and learners learn, classrooms have been the focus of most attention. Classroom is also the place where talk happens, and so the interest of researchers had been on the relationship between talk in classroom and learning (…).

I understand that these ideas resonate with the basis of this study in the sense that the setting for interaction, as narrativised by teachers, is the language classroom.

Interaction can be understood as the *talk* that happens in the classroom, as stated by Young (2008) above. Jenks and Seedhouse (2015, p. 3), in the introduction to their edited collection, define interaction in language teaching

as “whatever people say and do in ELT” can be considered interaction (ibid.). In van Lier (van Lier, 1988, p. 162), interaction is analysed in relation to cyclical rhythmic structures in a lesson, or “patterns of interaction” (ibid., p.162). Although the patterns of interaction are not the main focus of the analysis, this idea of patterns may help the understanding of teachers’ own perspectives of classroom interaction in their narratives.

Language teaching is here considered as teaching English as a Foreign Language (EFL) in Amazonas (see Section 1.3). EFL is part of the public school curriculum and is the main subject in the PEC. In both contexts, the EFL teachers have similar academic backgrounds where EFL is taught and considered from a communicative language teaching (CLT) stand point.

CLT has been referred to as an all-encompassing approach which accepts several methods to produce communicative learning (Brown & Lee, 2015; Harmer, 2001). Brown and Lee (2015), for instance, offer a brief history of the conceptualisation of CLT explaining that the term was built upon the notion of “communicative competence” as seen in Hymes (1972) and Canale and Swain (1980) and then developed from the work of Widdowson (1978) (1978), Brumfit & Johnson (1979), Breen & Candlin (1980), among others (Brown & Lee, 2015, pp. 30-31).

This thesis is also interested in the developments of CLT. However, this is not limited to current trends and, as mentioned in Section 2.3.1, related influential works which inspired today’s views are also relevant. Yet, because the participant teachers tell their stories and are expected to describe, interpret and position themselves with regards to what is CI, how the

simulations, the talk and the social interaction are going to happen is unpredictable.

In Richards and Renandya (2002) offer a view of CI, common in CLT research. More and more, CI has been studied as having a vital role in student learning in SLA. Among other factors which influence learners development (e.g., learners' age, affective and socio-cultural factors, interactional competence, etc.) interaction is taken as the most important, especially in relation to learners' speaking abilities (for details, see Shumin, 2002). Thus, how communication happens in the Amazonian context as told by teachers in their narratives needs careful analysis to observe to what extent it reflects this focus on speaking. The question that emerges at this point is: How do participants understand CI in their practice? Is it in fact essential to student learning in the participants' perspectives? Chapters 5, 6 and 7 will return to this question.

Finally, it is then on these aspects of CLT which closely influence the notion of classroom interaction that is the focus of this section. From this understanding, this study adopts the concept of communicative language teaching as offered by Brown and Lee's (2015) summary of CLT today as an all-inclusive approach which

> extends beyond the merely grammatical elements of communication into the social, cultural, and pragmatic features of language. It is an approach that encourages 'real-life' communication in the classroom. It aims to develop linguistic fluency and not just the accuracy […]. Learners are partners in a cooperative venture. And CLT-based classroom practices seek to intrinsically spark learners to reach their fullest potential. (Brown and Lee, p. 31)

As seen from the excerpt above, the features of CLT which Brown and Lee identify are closely related to the idea of interaction this thesis wants to study, that is, the understanding of classroom interaction teachers have drawn from their mental processes.

Then, an understanding of the participants' own conceptualisations of classroom interaction as interpreted from their narratives is based on the following assumptions. CI is related to social patterns of behaviour and in general terms, with the tacit use of language (mainly spoken, but not limited to it). In addition, CI encompasses pragmatic traits such as practice, training and simulation. Therefore, during interaction, students are expected to work collaboratively, which can range from requiring them to be very active to almost passive. This suggests that teachers expect students to reach some level of fluency in the target language from the continuous use of interactive activities. Through classroom interaction, teachers can discover more about a learners' *potential*, although contextual influences and learners' cognitive features can restrict their performance.

This idea of limited performance or competence needs to be considered in this study in an EFL context. When discussing interaction in CLT, the expectation is that such interaction should mainly occur in L2. As noted, both teachers and students have Portuguese as L1, so it might be used as a means of communication in the learning process of L2 (English). This means that the language which teachers and learners use in the classroom interaction, as described in the narratives, might not always be the L2, but

could sometimes be L1. Consequently, interaction in the EFL classroom – as described in teachers' narratives – could also mean interaction in L1.

2.3.3 Classroom interaction and discourse: understandings of communicative and interactional competence

The literature review illustrates a close connection between the understanding of classroom interaction and the notions of discourse and interactional competence (e.g., Brown & Lee, 2015; Canale & Swain, 1980; Richards & Renandya, 2002). As Tsui (1995, p. 12) puts it, the interaction which takes place in the EFL classroom has language both as the topic and the medium of class communication, affecting the nature of the discourse.

In fact, the study of classroom interaction is usually associated with classroom discourse because it presents language in interaction which is specific to the classroom context. For Nunan and Bailey (2009, p. 340), "classroom discourse is the distinctive type of interaction that occurs between teachers and students, and also among students during lessons." This view resonates with the broad interpretation of classroom interaction this study introduced in Chapter 1.

Nunan and Bailey's (2009) view is also related to the Initiation, Response, Feedback (IRF) pattern presented in Sinclair and Coulthard (1975). Although this does not involve recording or observing classroom interaction, the IRF structure can help the interpretation of teachers' understandings of CI. The Sinclair and Coulthard's (1975, p. 21) model suggests a structure of turn-taking between teacher and students in interactive routines. Their idea of a

"typical exchange in the classroom" consists of the three "moves" of *initiation*, *response*, and *feedback (ibid.)*.

In brief, the claim is that classroom routines follow particular interactional patterns, which are commonly referred to as IRF (initiation, response, feedback) or IRE (where E = evaluation), or just IRF/E (Walsh, 2006a, p. 5). This pattern has been used in several studies relating to classroom discourse and practice (e.g., Eggins & Slade, 1997; Evison, 2008, 2013; Seedhouse, 2004; Walsh, 2006a, 2011; Young, 2008, among others).

In addition to this view of interaction following the IRF/E (or IRE) pattern, discourse is also examined in the exchanges between a teacher and his/her learners in terms of *turn-taking* (Evison, 2013). Evison (2013, 2008), for instance, investigates turn-openings in the academic talk. In her study, the academic interaction was systematically analysed in order to examine the turn-openers used by both teacher and students. In her analysis one of the aspects she identified was that "informal academic encounters are not characterised by the interactional symmetry of conversational talk" (Evison, 2013, p. 18). This links to van Lier's (1988, 1996) idea that there are "significant differences between the classroom and many other interactive settings in terms of the way participation is organized" (van Lier, 1988, p. 99). Although the current study does not follow a similar analytical structure to that used by Evison (2013), it is possible to identify similar asymmetry in teachers' discourse about their interactional patterns that occur in the classroom.

The second connection to CI relates to the ideas of communicative and interactional competence. The notion of communicative competence introduced by Canale and Swain (1980) involves three types of competence: *grammatical*, *sociolinguistic*, and *strategic*. Based on this proposition they developed a "theory of communicative competence" (ibid., p. 29) whereby communicative language teaching should offer learners meaningful opportunities to participate in *communicative interaction* (ibid., p. 27).

This view was soon extended to the concept of *interactional competence*. In Walsh (2011) as in Sun (2014), for example, interactional competence relates to teachers who need to develop skills for the "interactional process" to "promote understandings." In other words, teachers need to develop "classroom interactional competence" (Walsh, 2011, loc. 228).

A review of the topic shows Kramsch (1986) was the first person to coin the conceptualisation of "interactional competence" in a seminal paper about language proficiency. In broad terms, it refers to the learners' ability to communicate in another language requiring more than just grammatical accuracy, but developing interactional skills and negotiating understandings and meanings (ibid.). Walsh (2006a) conveys this notion of interactional competence to the classroom as an interactional space and as a co-constructed social context, or contexts.

In brief, the concept of interactional space refers to the opportunities teachers and learners have to talk and contribute to the classroom activities (Walsh, 2011). In the case of classroom interaction, this space is mainly created and

managed by the teacher and its nature is influenced by the amount of teacher talk time and student talk time (ibid.).

Other interpretations of interactional competence (IC) agree on the idea of collaborative interaction and the management of students' opportunities to communicate. For example, Young (2008, p. 101) points out that it is "a relationship between the participants' employment of linguistic and interactional resources and the contexts in which they are employed." The resources mentioned are related to "identity, language and interaction" and participants make a reciprocal use of these resources and so "co-construct" their interactional competence (ibid.).

Developing interactional competence in this socially constructed context also suggests that there is a negotiation of roles between teacher and learner. Walsh (2006a, p. 130) argues that, classroom interactional competence (CIC) takes into account the "roles of teachers and learners, their expectations and goals (…); and the interplay between teachers and *learner* language." He also suggests that such roles could be revised so that teachers could play a "more central role in shaping learner contribution" (2012, p. 6). It seems that teachers' roles are central to negotiating and contextualising language use opportunities to facilitate the expected interactional competence.

Another view is observed in Thornbury and Slade (2006, p. 186) add that "competence in a language involves not just linguistic but social and cultural dimensions." In other words, individual knowledge, comes with the socio-cultural experience of the speakers as well as the contextual space of the

utterance and so, cannot be analysed as separated from them. Young (2008, p. 93) states that CI can also be understood as “a relationship between an individual, the individual’s ability, and that individual’s performance.” The teacher’s role is thus to help the learners’ performance match and develop their abilities. This perspective of the individual’s context also contributes to a better understanding of teachers’ narratives when they describe the interactive moments in their practice. The next section offers a discussion of all the aspects of CI discussed in the previous sections.

2.3.4 Drawing conclusions about classroom interaction

The conceptualisation of classroom interaction constructed in the previous section is strategic to the understanding of teachers’ own views of it. CI was here reviewed and discussed in relation to the literature in the field and to related topics taking into consideration the EFL context and background knowledge of the participant teachers. The main assumptions about CI which relate to this study’s purposes are:

- The notions of ELT, discourse, communicative and interactional competence studied in this section help shape the basis for the analytical structure of this thesis.
- Given the contextual influences and participants’ educational and professional experience, it can be assumed that, to some extent, teachers’ understandings of CI are similar to the ones discussed so far in this section.
- There is the possibility of participants’ understandings of CI relate to the use of both L1 and L2.

- The notions of CI from teachers' narratives will involve aspects of CLT, teachers' ELT academic experience and teachers' practice. These also have a close link to socio-cultural theories which regards learning as both individual and social.
- This thesis is interested in teacher cognition of classroom interaction, that is, teachers' own views of CI based on their knowledge, thoughts, beliefs and decision-making as articulated in their narratives.

Thus, in the analysis of teachers' narratives, it is possible to draw detailed conclusions about how teachers construct the idea of classroom interaction from their reflections about teaching practice. The next section offers a brief review of the understandings of the ideas which relate to both language teacher cognition and classroom interaction, such as reflective teaching, teacher praxis and experience as observed in the literature.

2.4 Language teacher education and reflective teaching: praxis and experience

Thus far, the conceptualisation of teacher cognition and classroom interaction has been reviewed to build a better understanding of this study. However, there are some topics which are intrinsic to ELT and closely related to reflective practice that need to be mentioned at this point, because they might contribute to the analysis. These are: reflective teaching, teacher praxis, and teaching experience.

The idea of reflective practice involves several concepts which have been referred to throughout this study. They are: teacher praxis, teacher experience, and reflective teaching (Bailey & Springer, 2013). As seen in previous sections, reflective practice also deals with the mental processes which affect action (Schön, 1995). In this section, I offer a discussion of these terms and explain how they relate to the concepts investigated in this study.

The representation of teacher practice this study aims to adopt involves several understandings. Teacher practice refers to the instructional processes which teachers use and are involved in (Richards, 1998); to Freire's (1987) notion of "praxis," which comprises not only action, but also reflection on the practice itself; to bell hooks' idea of pedagogical commitment whereby teaching should "empower students" (hooks, 1994, loc. 287), and to teachers being aware of their actions. When teachers work to improve their practice, they are also learning to foster their "awareness" of classroom actions and the "exploration" of these actions (Gebhard & Oprandy, 1999, p. 21). Teacher practice can also involve "*Awareness*, *Autonomy*, and *Authenticity*" (AAA) as suggested in van Lier's (1996, p. 5). According to van Lier, the AAA curriculum is "grounded not only in knowledge but in human values as well" (ibid.). In other words, teachers' actions, knowledge, and reflections about their teaching, or their peers' teaching, also make up teacher practice/praxis.

Teacher practice has also been referred to as *teacher experience*. In educational research, experience has been treated from several perspectives, that is, cognitive, personal, professional, social, conceptual,

and so on (see Dewey (1938), Clandinin & Connelly (2000), Borg (2006), Miccoli (2008), Clandinin (2013), among others). For that reason, I decided to discuss the notion of experience in this section, where it connects teacher cognition ideas to teaching practice – the mental processes with the action.

The literature suggests that experience, as many other constructs discussed in this study, is inclusive. Dewey (1938), for example, discussing the relationship between experience and education, understands that the term does not necessarily indicate educational experience; it can also be organic (related to human nature), personal, cognitive, and so on. He states that "the belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative" (ibid., loc. 200).

Another view of experience is in regard to knowledge. Woods (1996), for instance, argues that experience involves background knowledge. This knowledge refers to past events and also includes teachers' beliefs and assumptions about classroom practice (ibid., p. 49). A final link to experience refers to narrative enquiry because it is central to teachers' narratives. Clandinin and Connelly (2000, p.18) state that "experience is what we study and we study it narratively because narrative thinking is a key form of experience and a key way of writing and thinking about it."

From these ideas on experience, I base my understanding of the term. When considered as a teacher cognition construct, it represents a compilation of mental processes which are based on an accumulation of knowledge. In other words, as teachers learn and do, or do and learn, they store such

knowledge as experience (Dewey, 1933). This is a complex process which does not only involve knowledge, but also trial and error, decision-making, thinking, believing, and remembering, and so on. This intellectual process builds the other understanding of teacher experience, that is, practice. Thus, the notion of experience as practice implies that teachers know because they have done it before (Dewey, 1910, 1933). Considering practice as praxis, experience here involves knowing from doing, reflecting about it, and doing it again – the same way, differently or better. Later (in Chapter 3) I discuss the relationship between experience and narrative.

The last concept which builds teacher practice refers to the relation of action and reflection – praxis (Freire, 1998), which is here analysed in the light of the works of Schön (1995) and Walsh (2011). Schön (1995, passim) explains that the process of "reflecting-in-action" is also a process of "knowing-in-action." Knowledge affects both reflection and action, and teachers' actions might generate changes in their own mental process as reflective practitioners. In Walsh's (2011) view, for teachers to perform effective reflective teaching, they need to learn how to do it, and that implies becoming researchers themselves. Thus, as researchers of their own practice, teachers are able to investigate reflective practices from their source – themselves and their own classrooms (passim, loc. 3401-3526).

From these three perspectives (teacher praxis, teacher experience, and reflective teaching), I suggest that in this study, not only do the participants, become the reflective practitioners throughout the research process, but so does the researcher. Although the aim of this research is not teacher

development per se, the process of articulating narratives might generate changes in teacher praxis during the research process. This reflective moment can generate further reflection-in-action and reflection-on-action (Schön, 1987).

Thus, for the purposes of this study, the term teacher practice means that teachers' experience (actions and mental processes) is connected to reflection and pedagogical commitment. Here, teacher practice is interchangeable with teacher praxis.

2.5 The interrelation between the main concepts

All the ideas discussed in this chapter – teacher cognition, classroom interaction, CLT, reflective teaching, teacher praxis, and experience – greatly contribute to the foundations of this study. It was discussed how teacher cognition, reflective praxis and classroom interaction share relationships in terms of teachers' mental processes and teachers' actions. Such connections also suggest that the constructs of teacher cognition play an important role in this study because it is through them that practical processes will come to light in the narratives.

In the conceptualisation of teacher cognition, the four constructs are closely interrelated in the ways they have been explored in the literature. This thesis focuses on understanding how the teachers conceptualise classroom interaction in their practice, and it can benefit from the links between the four

cognitive constructs which can generate meaningful results from the analytical stage.

As for the concepts from ELT and reflective practice, they can complete the understandings of both teacher cognition and classroom interaction because they are part of teachers' mental and practical lives. In other words, ELT is the context in which the teachers operate and the purpose of their profession. ELT is the product of the mental process and the action itself. A clear idea of how the conceptualisation of classroom interaction emerges from teachers' narratives is necessary within the ELT context. Finally, the reflective practice is inherent to the process of narrativising praxis and perhaps unintentionally, teachers' reflections on their classroom practices are going to bring about changes in their practice and generate their development as teachers.

2.6 Chapter summary

This chapter offered a literature review on main conceptualisations which underlie the current study: teacher cognition, classroom interaction and teacher practice. In the teacher cognition section (2.2), we noted that this thesis examines four main constructs which help understand EFL teachers' minds; and that they have an interrelationship between them. In the classroom interaction section (2.3), the conceptualisation of CI was made with basis on socio-cultural views of learning, on CLT, on discourse, and on interactional competence. In the reflective praxis section (2.4) there was an overview of practice as *praxis*, reflective teaching and experience as they are

recurring themes throughout this study. Next, Chapter 3 offers a detailed view of narrative enquiry as the methodological basis for the current thesis.

3 Theoretical perspectives

3.1 Introduction

This chapter presents the theoretical perspectives which underpin this thesis. It offers an overview of this study's epistemological and ontological views and constructs the understandings of narrative enquiry as a methodological approach to the understanding of lived experiences articulated in stories. From the main perspectives upon which narrative enquiry is built, two are particularly meaningful for this study: the sociolinguistic and the literary.

This study focuses on the interpretation of teachers' narrativised cognition of classroom interaction in language teaching, to understand the multiple meanings which teachers' mental processes are able to generate. In addition, this chapter discusses the idea that although teachers' narratives are produced individually, they are also the outcomes of community experiences, shared knowledge, contextual and temporal aspects, among other influences. This resonates with the socio-cultural view of the co-construction of learning discussed in the previous chapter (2). Thus, this chapter constructs a conceptualisation of narrative enquiry for the purposes of this study and through sociolinguistic and literary lenses.

In view of these perspectives, the chapter is organised as follows. Section 3.2 considers the epistemological and ontological stance of the research, as well as matters of reflexivity and positioning. Section 3.3 presents the objectives and research questions which underlie the study. Section 3.4

focuses on the nature of narrative from two main standpoints: the sociolinguistic and the literary views of narrative. Section 3.5 centres on narrative as enquiry as it is studied in the social sciences, showing the interrelation between narrative and the other themes investigated in this study – teacher cognition and classroom interaction. It also offers a framework of narrative research to facilitate the understanding of all the connections constructed during the research process.

3.2 Epistemological and ontological stance

This qualitative research was designed from a constructionist epistemological standpoint and an interpretivist theoretical perspective to investigate the ways in which teachers of English in Amazonas, Brazil, narrativise their cognition of classroom interaction. The methodology was developed based on narrative enquiry, hence, the methods used to generate data were spoken and written narratives, generated from sociolinguistic interviews, narrative production, and focus group discussions (see Section 4.3 for details of the methods used). As noted, this study focuses specifically on four of the constructs of teacher cognition, i.e., knowledge, thought, beliefs and decision-making, and the interrelation which can emerge between them. The data analysis uses elements of discourse analysis to interpret the data from the epistemological standpoint of this study. It also offers a thematic approach to the research corpus considering the previously defined and emerging themes (see Section 4.4 for the analytical process).

The understandings which emerge from this data analysis are here co-constructed from the engagement and interpretations of the participants and the researcher. The idea of co-construction is defined by Jacoby and Ochs (1995, p. 171) as “the joint creation of a form, interpretation, stance, identity, institution, skill, ideology, emotion, or any other culturally meaningful reality.” In other words, the participants’ data production is influenced or guided in response to the researcher’s questions, so building shared meanings. Therefore, the results presented in this study can be considered as a representation of the researcher’s interpretations of the participants’ (co-constructed) narratives. The use of narrative enquiry, as a methodology which focuses on the participants, will help the understanding of the (socially) constructed knowledge (Croker, 2009). These multiple individual understandings will allow the building of new realities.

This study also approaches the elements of the research process – method, methodology, theoretical perspective, and epistemology – in agreement with Crotty (1998). Thus, the method is considered as the procedures and techniques used for data production and analysis (e.g., narratives and interviews, thematic and discursive analytical techniques). The methodology is respected as the design or “plan of action” (ibid., p. 3), in this case, the narrative enquiry. In addition, the theoretical perspective reflects the philosophical stance of the research. Finally, the epistemological basis is the understanding of “how we know what we know” (ibid.).

The current study, as any other research practice, will inevitably have some limitations. In this case, the data was gathered at a specific time, in specific

contexts, and with a limited number of participants and might not be consonant with similar data gathered at a different time and place, or with different participants. However, I argue that the ontological possibilities generated from the results of this study relate to the conditions it was developed in. This study can thus open new possibilities, new interpretations, and new realities for research based on the findings, challenges, and nuances it holds.

3.2.1 Reflexivity and positioning in the research process

In the development of a piece of research, qualitative inquirers are expected to identify their stance at several stages of the process – while generating and analysing the data, or during the writing stages. From this perspective, researchers need to establish their positioning in relation to the data itself, to the participants, and to the field researched (Creswell, 2013). Such self-disclosure can reduce the distances which separate the researcher from the participants who help generate the data (ibid., p. 214).

As a researcher, I enter the research setting as both an insider, because I am also an English teacher like the participants, and as an outsider, because I do not teach in the basic education public schools or in the PEC, but in the higher education context in Amazonas, as mentioned in Chapter 1. Nevertheless, drawing from Hammersley's (2002, p. 33) model of engagement in ethnography, I am an insider/outsider in two distinct situations which overlap and relate to each other (Hammersley, 2002).

First, I entered the field as outsider until the moment of *engagement*, when I met the teachers in their own environment. Then I developed the fieldwork as an insider, working with the participants and returned to being an outsider again after the moment of disengagement (Hammersley, 2002). Then, throughout the research process there were several moves from insider to outsider positioning which certainly helped my *self-as-researcher* find the point of view of my *self-in-the-field*. This flexible development did not happen abruptly, but as a transitional and interesting shift (ibid.).

Given my positioning as insider/outsider, I tried to shape my relationship with the participants to reduce the distance between us. Because, as mentioned, I have worked as an instructor in teacher development programmes, and it was possible that issues of power could have emerged if the participants viewed me in that role (as well as a researcher), but I do not believe that was the case. At the same time, because my relationship with teachers in such programmes is usually based on student trust and openness, I believe that establishing a good rapport from the beginning of the contact with participants was the best solution to reduce the possible distance between us.

3.3 Research objectives and questions

As mentioned in Section 1.1, the main objective of this study is to investigate the ways in which Amazonian EFL teachers, from specific contextual conditions, narrativise their cognition of classroom interaction. Thus, this

study draws on narrative enquiry and discourse analysis to understand the close interrelation between the underlying ideas of teacher cognition, classroom interaction, narrative, language teaching and praxis.

In addition, this thesis aims to understand teachers' own conceptualisation of interaction as expressed in their narratives; to investigate how teachers articulate their cognition of classroom interaction in narratives; to develop and inspire new models of narrativised cognition; and to improve the understandings of language teachers' mental processes.

In light of the aims presented above, the epistemological assumptions of this study, and considering all the ideas, understandings, constructs, and contextual influences investigated here, the main research questions for this study are:

- *What are teachers' own conceptualisations of classroom interaction in relation to their context and experience*?
- *How does teacher knowledge influence the understandings of language teacher cognition in teachers' narratives*?
- How do English teachers articulate cognition of classroom interaction in their narratives?

In order to answer these questions, this study draws on narrative enquiry as the main methodological approach to this study. The next sections present the process in which this methodology is gradually understood according to this study's goals.

3.4 The nature of narrative: the possibilities in the interpretation of teachers' minds

The main focus of this section is the conceptualisation of *narrative* as explored in this thesis. Because of the complexities inherent to the concept it was challenging to find a complete meaning for the term. However, I argue that both the sociolinguistic and the literary perspectives play important roles in the building up of a thorough conceptualisation of narrative as perceived in this study. An initial working definition of *narrative enquiry* is that it refers to both the method and methodology used to understand diverse knowledge processes. In this study, it explores teachers' stories about their practice and help establish how to interpret them (Clandinin & Connelly, 2000). Before presenting a discussion of narrative as *enquiry*, this section first introduces the interpretations of the origins, developments, and nature of *narrative* to reach an understanding of the term.

The nature of narrative evokes different understandings according to the field in which it is studied (Andrews, Squire, & Tamboukou, 2013). It can suggest the idea of a story or account (Connelly & Clandinin, 1990; Labov, 2007); an enquiry – a research method, an approach or a methodology (Clandinin & Connelly, 2000; Hendry, 2002); a means of D/discourse (Gee, 1991, 2014), a "talk-in-interaction" (De Fina & Georgakopoulou, 2012), an "artistic creation" (Tannen, 2007) or an "equivocal" term (Polkinghorne, 1988). It can also be narrowed down to "the kind of organizational scheme expressed in story form" (ibid., p. 13).

The term *narrative* has, in fact, been widely explored by scholars in different fields and has collected a wide array of meanings. Researchers have devised many interpretations which allow for new meanings to emerge. In general terms, a narrative is simply understood as a story, or it can also refer "to the process of making a story, to the cognitive scheme of the story, or to the result of the process of making a story – also called 'stories,' 'tales,' or 'histories' (Polkinghorne, 1988, p. 13). This idea of *making a story* links to Gee's (2014) understanding that narratives are also sense-making devices. He says that "people often encode into narratives the problems that concern them and their attempts to make sense or resolve these problems" (ibid., p. 181). In the case of the participant teachers, the problems related to the classroom, the interaction, and the practice. However, these individual definitions of narrative do not reflect the inclusivity of the term.

This thesis draws on a combination of sociolinguistic and literary approaches to narrative to construct a better understanding of narrative enquiry. The conceptualisation of narrative developed in this study also accepts some pre-determined design (Labov, 1972), explores the "vicissitudes of human intentions" (Bruner, 1986), aims to generate meaning from human existence (Polkinghorne, 1988), and can represent the phenomenon, the method and the methodology all at once (Clandinin & Connelly, 2000).

In addition, this positioning towards an inclusive interpretation of narrative is supported and influenced by some seminal works from the two approaches mentioned above, as well as other significant contributions to the literature which evolved from them (e.g., Clandinin, 2006; Clandinin & Connelly, 2000;

De Fina & Georgakopoulou, 2012; Polkinghorne, 1988). Thus, in the next sections, I present a discussion of influential work from both the sociolinguistic and literary approaches to narrative, respectively. Then, I show the existing relationship between them and narrative enquiry, as well as their importance to this study. Some of the terminology used in this chapter will be explained according to this research's purposes, because in this case, summarising viewpoints from different fields would be complicated and unproductive.

3.4.1 Narrative of experience: the sociolinguistic approach to narrative

Although the general notion of narrative is connected to the literary idea of narrative as *story*, in this study I choose to begin by exploring narrative from a sociolinguistic perspective. Yes, narrative is story, but for the purposes of this study, there are other concepts which are also essential for a narrative to be a narrative as represented in this thesis.

From the sociolinguistic perspective, influential models include those of Labov and Waletzky (1967, 1997), Labov (1972), and Eggins and Slade (1997) aiming to find a conceptualisation of narrative in relation to its main *elements*. In short, the *elements of narrative* refer to a combination of aspects which constitute a narrative, such as mode, or modality (spoken or written), structure (beginning-middle-end), function (evaluative, referential) and dimension (social or temporal). They help build the conceptualisation of narrative as a representation of teachers' experience which are analysed in chapters 5 and 6.

The first perspective to be considered from the sociolinguistic literature developed from the work of Labov and Waletzky (1967) and Labov (1972) which presented a functional analytical framework of narrative of past experience. In Labov and Waletzky's (1967) seminal work, which has been - to this day – extensively used as a source for narrative studies, narrative is construed (in technical terms) as "any sequence of clauses that contains at least one temporal juncture" (ibid., p. 21). In simpler terms, for a narrative to be a narrative it needs to be "the presentation in discourse of a sequence of past events" (…) and have "a beginning, a middle and an end recognized by some principle" (Labov, 2013, loc. 428).

Nevertheless, in addition to analysing narrative from its beginning-middle-end structure, it can be understood from this view that the story told can also be explored beyond its temporal orders, to its clause types, verbal sequences, among other narrative features. In this study, the verbal sequence and temporal aspects of participants' narratives, for instance, help identify the main constructs of teacher cognition and classroom interaction in the analytical stages and are explored later (see Chapters 5 and 6). However, this study's view of narrative aims to be more inclusive and accept Mishler's (2006, p. 31) suggestion that "a narrative must be more than one thing following another," and that there are other models of narrative analysis to be considered in the field.

Whilst the framework proposed by Labov and Waletzky (1967, 1997) and revised by Labov (1972, 2013) aims to understand narrative from a very detailed and structural perspective, in this study, narrative enquiry intends to

reach a different level of analysis. For example, in Labov and Waletzky's (1967, 1997) model, the common narrative structure of 'beginning', 'middle' and 'end' is replaced by a new set of functional stages, that is, *orientation*, *complication* (or *complicating action)*, *evaluation*, *resolution*, and *coda* (Labov & Waletzky, 1997, pp. 27-35). Later, as pointed out by McCarthy and Carter (1994), Labov added *abstract* as an initial stage (ibid., p. 33). In the analysis proposed in this thesis, these stages are not applied completely, but represent a meaningful guide to the understanding of teachers' narratives.

De Fina and Johnstone (2015), for instance, show that in the Labovian view, narratives follow very specific structure and were not studied as "any talk about the past, nor any talk about events; it is specifically talk in which a sequence of clauses is matched to a sequence of 'events which (it is inferred) actually occurred' (Labov 1972: 360)" (De Fina & Johnstone, 2015, loc. 6054). In the case of the teachers' narratives investigated in this thesis it can be inferred that the storyline presented is studied as the representation of teachers' experience. This view considers that at some point, such experience has occurred to the narrator (the teacher).

Another perspective considered in this study is adapted from the Labovian model. In Eggins and Slade's view (1997, p. 236), for example, the category of "storytelling texts" and the narrative framework are the bases for the understanding of the genres. They suggest the narrative stages can be defined by "the functional role each stage is playing" in the narrative (Eggins & Slade, 1997, p. 233). Thus, they adapt the Labovian model of narrative to

understand other genres such as *anecdote*, *exemplum*, and *recount*, each with its own functional stages (ibid., p. 236).

Thus, analysing the narrative from its functional stages involves its meaningfulness, because each stage considered has a purpose in the story. For example, the idea of *beginning* (as in beginning-middle-end) separates the story temporally, but does not present another specific function. However, an *abstract* has the function of summarising the story (Eggins & Slade, 1997). Seeing narrative from this perspective helps the understanding of how these stages fit together to make a complete narrative.

Eggins and Slade's (1997, p.229) view that stories "emerge from social experience and are shared in social contexts," suggests that social aspects related to the narrator (in this case the teacher) can also be identified from the story. That is the case of some identity characteristics such as gender, class and ethnicity. This research does not focus specifically on teachers' social identity in relation to their context, but it can emerge in their narratives and become meaningful to their narrativised experience. This perspective relates to the idea of dimensional spaces proposed by Clandinin's (2013) which refers to the temporal and social dimensions of narrative.

As noted, the studies of narrative drawn from the sociolinguistic standpoint have focused on aspects related to time, individual, and shared experience. The temporal dimension refers to the use of verb tense and the focus on present or past experience. This view links to the idea of specific temporal juncture proposed in Labov and Waletzky (1967), but seems to go beyond their take on time. Even in narrative analyses which do not specifically focus

on their same idea of temporal juncture (as is the case for this study), the time in the narrative influences its conceptualisation, that is, representations of time in a narrative become part of what a narrative means.

The social aspects of a narrative which occur in dimensional space (Clandinin, 2013) can be considered in relation to the individual and shared experience (or community practice). In the case of teachers' stories in this thesis, individual and group standpoints are expected to emerge in the data analysis. From this possibility, the stories analysed will represent teacher cognition of classroom interaction as observed in the participants' own views of their practice in their specific dimensional space. In other words, this thesis draws on the sociolinguistic view of the temporal dimension by going beyond the limits of the Labovian temporal juncture. Instead it considers the broad notion of dimensional space proposed by Clandinin (2013).

Thus, for the purpose of this study, the sociolinguistic view of narrative is considered within the following assumptions. First, teachers' stories of their experience have (or are expected to have) as their focus, classroom interaction. Next, the structure of narrative can have five functional stages (*abstract*, *orientation*, *complication*, *evaluation*, and *resolution*), but is not limited to them. In addition, the idea of *complication* in this study is examined in terms of classroom experience, not in terms of the *life and death stories* as explored by Labov (2013). Similarly, there is no intention here to develop a detailed analysis of the temporal juncture, that is, to analyse detailed verb tense structure. In addition, in this study, the conceptualisation of narrative is

construed by considering the *dimensional space* or both the time and the social aspects (individual and group) narrativised by teachers.

In summary, the sociolinguistic views of narrative discussed in this section have their part in shaping the nature of narrative in this research. The narrative aspects discussed (time, individual and shared experience, function, etc.) represent parts of the interpretation of narrative as understood in this thesis. I return to these aspects later, after the exploration of the literary approach to narrative. The combination of the sociolinguistic with the literary view of narrative helps conceptualise narrative for the purposes of this study.

3.4.2 Tale, teller and addressee: the literary approach to narrative

As mentioned above, avoiding any categorisation or formal study, there is a common sense view that narrative relates to a story which has a beginning, middle and end. Simply encountering the term *narrative* will probably recall our first experiences of reading Grimm's fairy tales or any contemporary stories. Therefore, it can be postulated (although some might not agree) that narrative is seen by many as having its foundations in the literary field. This links to Tannen's (2007, p. 40) suggestion that narrative is also considered as a "synonym with literary narrative." Thus, drawing on the works of Toolan (2007), Bruner (1986), Tannen (2007), and Polkinghorne (1988), this section aims to find a conceptualisation of narrative from the literary perspective.

In the literary approach, a narrative is composed by "Tale, Teller, and Addressee," according to Toolan (2007, loc. 313). This standpoint can be

related to dimensional space (temporal and social dimensions) as noted in Section 3.4.1. Thus, the *teller* and the *addressee* seem to belong to the social aspect of narrative, whilst the *tale* can relate to both the social and the temporal aspects of a narrative.

The *teller*, for instance, as the narrator, plays the main role as the "necessary source" of the story (ibid., loc. 320). In Toolan's (2007, loc. 320) view, the narrator "is often 'impersonalized,'" but, in this study, the teller cannot be completely thought of as faceless, because the participants' voice, identity, and professional context are embedded in their stories. The *addressee* plays the role of the reader or listener and is able to evaluate the story and decide if a text is good or not. Finally, the *tale*, is usually associated with plot, genre, form, time, place, among other literary elements (Coulter & Smith, 2009; Polkinghorne, 2007). In this study, the tale is represented in the teacher's story itself.

There is a close interrelation between these literary elements (tale, teller, and addressee). Toolan (2007, loc. 437), for instance, states that the experience expressed in a story is learned by "we humans" and this closely relates to the *addressee's* opinion about a story told by the *teller*, because what is learnt from it can make a narrative good or bad. Considering this idea from the perspective of this research, I argue that the human experience (the tale) as articulated in teachers' (the tellers') narratives can create a dialogue with the reader and the researcher.

This dialogic interpretation of narrative links to the Bakhtinian (Bakhtin, 1981, 1986) view of language which to date, has influenced works on narrative,

discourse and literary analysis (e.g., De Fina & Georgakopoulou, 2012; Tannen, 2007; Tannen et al., 2015). This dialogic view also resonates with Tannen's (2007) understanding of narrative and constructed dialogue. Drawing on Voloshinov and Bakhtin, among others, she explains that "not only is every utterance dialogic, but also hearing and understanding are dialogic acts because they require active interpretation, not passive reception" (ibid., p. 103). Here, there is a shift from the monologic Labovian view to a dialogic Bakhtinian perspective of narrative. In other words, narrative is not only a story created and told by the narrator, but also a story co-constructed (*built together*, as put by Gee, 2014) in dialogic acts. In terms of the current study, the narratives are co-constructions of both the researcher – who asks questions and offers prompts (this is explained in Section 4.3) and the participants who respond by narrativising their experience.

The relationship tale-teller-addressee, can also be seen in the notion of the "psychology of literature," proposed by Bruner (1986, p. 4), which can clarify the effects that a good text can have on readers. Bruner explains that there is more in a literary text than its structure, form, plot and genre and that a narrative mode of thought can establish verisimilitude, that is, anything that makes a story believable and interesting to the reader.

In Bruner's psychologist view of narrative (1986, p. 16), he argues that "narrative deals with the vicissitudes of human intentions. And since there are myriad intentions and endless ways for them to run into trouble – or so it would seem – there should be endless kinds of stories." Bruner's

understandings of literature focus not only on the text, but also on the reader and on the ways the reader understands the multiple possible meanings of a text. He believes in the idea of narrative as a “mode of thought” in which experience is ordered (the other mode is “paradigmatic”). This notion resonates with the view of narrative in literature and narrative in research because the “vicissitudes of human intentions” can be found in the participants’ narratives as well.

Still in the literary field, Polkinghorne (1988, p. 14) presents Barthes’ understanding that narrative “may incorporate articulate language, spoken or written” and that “the history of narrative begins with the history of mankind.” Polkinghorne (1988) uses Barthes’ view of narrative to discuss functional and individual aspects of narrative. He asserts that

> Barthes believes that narratives perform significant functions. At the individual level, people have a narrative of their own lives which enables them to construe what they are and where they are headed. At the cultural level, narratives serve to give cohesion to shared beliefs and to transmit values. (Polkinghorne, 1988, p.14)

In the case of the current study, it becomes clear that teachers transmit values and shared beliefs about EFL teaching. Polkinghorne’s (1988) suggests that the study of narrative has its grounds in old theories which gradually developed as new ideas were added to the old ones. In his words, narrative was treated as a genre and had its form, structure and plot usually investigated in relation to literary interests (ibid.).

Thus, from the literary perspective, narrative is composed of three main elements: the tale, the teller and the addressee. These elements include the social and temporal aspects of a story. Also, as seen in this section, narrative

involves a dialogic characteristic which makes it, by nature, co-constructed by the narrator (or teller) and the listener (or addressee). Finally, narrative can be articulated in speaking and written modes to express understandings of human experiences (Section 3.5.3 discusses the narrative modes).

3.4.3 The interrelation between the sociolinguistic and the literary views of narrative

Focusing on narrative from two perspectives: sociolinguistic and literary, means that both conceptualisations have features which resonate with each other and with the narrative research proposed here. For instance, the *dimensional space* (discussed in Section 3.4.2) integrates literary components (such as tale-teller-addressee), because they refer to both the social (individual and group) and the temporal (plot – tale, context) aspects of narrative.

In addition, the functional aspects of narrative (proposed by Labov and Barthes) are related in terms of the social and cultural purposes seen in the literary view and exhibited in the shared beliefs of the story, and in the organisation of the stages of narrative (abstract, orientation, complication, evaluation, and resolution), observed in the sociological perspective. This relationship helps us understand the co-constructed, or dialogic discourse which emerges from the participant teachers' narratives. Finally, narrative as observed from both viewpoints can be taken as the representation of these teachers' individual and shared experiences, in consideration of their contextual influences and temporal aspects.

The combination of the two views of narrative (e.g., sociolinguistic and literary) also supports the multifaceted nature of narrative conceived in this study. If narrative naturally "resists straightforward and agreed-upon definitions and conceptualizations" (De Fina & Georgakopoulou, 2012, p. 1), then it needs to be studied from a wider perspective. Section 3.5 explains how the inclusive standpoint of narrative affects the understanding of narrative as enquiry for the purposes of this study.

3.5 Narrative as enquiry

The focus of this section is the understanding of *narrative enquiry* as a qualitative approach to research. In this study I bring a broad understanding of *narrative enquiry*, accepting that the term can refer to the phenomenon, the method, or the approach. This positioning is inspired by the narrative enquiry standpoint in the works of Connelly and Clandinin (1990), for example. They understand *narrative* as both "phenomenon and method" (ibid., p. 2). Similarly, drawing from other authors, Connelly and Clandinin (1990) argue that to make "good narrative" (ibid. p. 7) it is necessary to consider a set of possible criteria such as "apparency," "verisimilitude," "transferability," "authenticity," "adequacy," "plausibility," among others (ibid., pp. 7-8).

Clandinin (2013) also sees narrative as wide-ranging and acknowledges that narrative has come "to refer to almost anything that uses, for example, stories as data, narrative or story as representational form, narrative as

content analysis, narrative as structure, and so forth" (Clandinin, 2013, p. 11). Narrative enquiry or narrative research (henceforth interchangeable terms) has been adopted as a qualitative method in the humanities and social sciences for more than three decades in an attempt to understand human experience (Clandinin & Connelly, 2000; Polkinghorne, 1988). In the humanities, for instance, the study of narrative has received much attention in the literary, historical, and linguistic fields.

Similarly, in the social sciences, researchers have presented a growing interest in narrative as a method of enquiry (e.g., Atkinson, 2010; Barkhuizen, 2008; Elbaz-Luwisch, 2007; Hendry, 2002), as well as an instrument for academic and professional development, as seen in Bailey (2006), Barkhuizen and Wette (2008), Conle (2000), and Johnson and Golombek (2011), Schiffrin (2010), among others. More specifically, in the educational field, scholars have turned to narrative in order to better understand teacher knowledge and experience (e.g., Clandinin & Connelly, 2000; De Fina & Georgakopoulou, 2012; Nelson, 2011; Pinnegar & Daynes, 2007). Clandinin (2013, p. 215) argues that there has been "a shift from the margins" and narrative research has gradually become more popular.

From these references, *experience* is the point of intersection from which various interpretations emerge in narrative research (Clandinin & Connelly, 1998; Connelly & Clandinin, 1990). For example, Clandinin and Connelly (2000, p. 19) suggest the idea that "experience happens narratively" and that if "narrative inquiry is a form of a narrative experience, (…) educational experience should be studied narratively." However, despite the shift to

narrative enquiry in the study of experience, there are still many different angles to be studied. All these diverse perspectives deserve special attention because they have developed from distinct fields which have been gradually adding new constructs and new conceptualisations to the pre-established narrative approaches. Thus, this study proposes to find a coherent framework for these ideas about narrative research (see Figure 3.1) which resonate with the aims of this thesis, that is, to understand teachers' minds in relation to classroom interaction as expressed in their narratives.

In designing this research, I have come to understand that the various perspectives from which narrative has been investigated are in fact related to each other, not only by the study of experience, but also by other themes. For example, some educational researchers look at the literary approach to understand narrative structure (Clandinin & Connelly, 2000), while others would rather adopt the linguistic approach. Whilst philosophers analyse literary narrative to create new concepts of chronology (e.g., Dowling, 2011; Ricoeur, 1980), other scholars investigate historical narrative to comprehend social life. As stated in Section 3.4, this study focuses on the sociolinguistic and literary perspectives to understand the nature of narrative.

In this section, some of these standpoints are discussed considering that there is no single right or wrong approach to narrative enquiry. Instead, the many perspectives can become part of the same methodological concept. For this reason, narrative enquiry will be treated in this thesis as an all-encompassing term which comprises various nuances and meanings which are sometimes discussed separately in the literature.

3.5.1 Narrative enquiry in the social sciences

In educational research, narrative enquiry can be used to understand different knowledge processes, though teachers' experience is the most explored area (as suggested in Denzin & Lincoln, 2005; Pinnegar & Daynes, 2007). As noted in the introduction above, experience has been the main theme in narrative enquiry studies. This idea resonates with Clandinin and Connelly (2000), for instance, who understand narrative as "the best way of representing and understanding experience" (p. 18). Through narrative enquiry researchers are able to approach teachers' stories as they are told from an insider perspective (Johnson, 2007, p. 175) and from this angle, investigate teachers' mental processes like teacher cognition or teacher development.

The literature suggests that for narrative enquiry to be considered *good*, it needs to bring together certain intrinsic characteristics. However, for different research aims, new features have the potential to emerge, making narrative enquiry a dynamic methodology which is constantly developing. This mutable aspect is part of the appeal of qualitative research, because researchers can adapt pre-established narrative concepts to correspond to their own research goals and conditions. These variations and developments of the narrative enquiry's main features seem to work like a recycling process which breaks old practices and introduces new concepts, interpretations, and methods to the methodology.

A good example of such changes and adaptations is presented in Barkhuizen and Wette (2008), who adapted their narrative enquiry procedures to meet

their research purposes. They explain that traditionally, narrative enquiry was used with a small number of participants over a long period of time. In order not to lose any research opportunities, they decided to develop narrative research with a large number of participants over a short period (ibid., p. 373). Other scholars also present their own versions of narrative enquiry in their studies as a way of engaging with research innovations (e.g., Barkhuizen and Wette (2008), Golombek and Johnson (2004), and Johnson and Golombek (2011).

These different understandings of narrative enquiry seem to correspond to the complexities of the methodology. In general, scholars tend to be very careful to offer a final word about narrative enquiry. For instance, in 2000, Clandinin and Connelly (p. 20) preferred to have a nuanced understanding of the term and not giving a specific definition. Instead, they offer a "working concept" of the main characteristics of narrative enquiry. Thus, interpretations are offered by provocative questions such as "Why narrative?" and "What do narrative inquirers do?"(ibid., pp. 1, 48). Not wishing to offer a definition of narrative enquiry suggests that there is an underlying uneasiness about its meanings. This attitude also signals that this field of enquiry is still under construction.

Nevertheless, in 2013, Clandinin presented a section called "A definition of narrative inquiry" where she sees narrative enquiry

> as an approach to the study of human lives conceived as way of honouring lived experience as a source of important knowledge and understanding. (Clandinin, 2013, p. 17)

Following this standpoint, Clandinin cites Clandinin and Connelly's (2000, p. 20) "working concept," cited above. This indicates a change in the author's positioning toward narrative enquiry. This latter definition offered by Clandinin in 2013 also relates to the aims of this thesis, that is, to study teachers' narrativised cognition as a source for understanding teachers' professional experiences.

In addition to lived experience, various other themes are also greatly explored through narrative research, such as reflective teaching, context, culture, and language. Even though this thesis is not investigating these themes at length, they seem to be intrinsic to teachers' experience. Then, it is my expectation as a researcher, to find indications of reflection, elements of teachers' professional context and culture, as well as topics related to language, in teachers' narratives.

In conclusion, narrative enquiry is here recognised not only as a methodology which can help reveal teachers' practitioner stories, but also as a mediation tool through which to construct, co-construct and reconstruct knowledge. Such knowledge is then (co-, re-) constructed in the cooperative undertakings of researcher and teachers. The nuances of the methodology seem to match the complexities of the main themes here explored: teacher cognition and classroom interaction.

3.5.2 The principles behind narrative as a research method

Narrative has been hitherto looked at as story, as language, and as enquiry. In this section, narrative is considered as a research method. All the many

facets of narrative indicate the significance of this approach to research. In general, in narrative enquiry, spoken or written narratives have been studied as the primary source of data (as in Barcelos, 2006) and from the stories of their lives and practice, participants can narrativise their experience. In addition, narrative can become an effective research instrument, especially when associated with other research methods such as interviews or focus groups.

In educational research, narrative has been used as a method to investigate new dimensions and nuances in the lives and experience of teachers. Through narrative it is possible to understand teachers' minds and learn about teachers' knowledge, thoughts, professional issues, beliefs, among other matters. As mentioned, narrative has also been used to promote teacher development. In ELT for instance, this use has been discussed in Bailey (2006), Barcelos (2006), and Freeman (1998).

In this perspective, I believe that when teachers articulate their experience in narrative, the results which emerge have the potential to trigger reflection and consequently development. In other words, teachers engaged in producing narratives for enquiry can also be considered as teachers involved in or, at least, interested in self-development, action-research, research, reflective teaching, and so forth. Consequently, when teachers narrativise their experience for professional development, they are, at the same time, reaching new levels of enquiry.

The concept of *narrative* can be confused with the broad term *narrative enquiry*, but it can be easily clarified. For the purposes of this study, *narrative*

refers to the spoken and written narratives produced by teachers – e.g., teachers' stories. Narrative enquiry, on the other hand, concerns the broader sense of the term – e.g., the research methodology, or narrative research. Section 3.5.4 offers some final thoughts about narrative and narrative enquiry.

The idea of narrative enquiry as an umbrella term – encompassing various meanings and interpretations – can also be applied to narrative as a research method. Participant stories are not looked upon as single pieces of text. Instead, they are analysed as part of a larger process. Other features – such as context, culture, and methods (e.g., interviews and focus group discussions) – provide narratives with additional meanings and a basis for the construction of knowledge from the narratives. Section 3.5.4 brings an explanation of what this study understands as narrative enquiry.

3.5.3 The narrative modes

In this study, narratives were articulated in written and spoken ways. These ways are referred to as *modes*, or *modalities*, or considered as "channels of communication" (McCarthy & Carter, 1994, p. 21). The written modality has been widely used in narrative research and it can be considered "the best way of representing and understanding experience" (Clandinin & Connelly, 2000, p. 18). Teachers can also express their experience through narrative writings, from which researchers are able to investigate teachers' mental processes such as teacher cognition or enquire about teacher development.

In a study about teachers' beliefs, for example, Barcelos (2008) recognises narratives as important tools to help teachers reconstruct their personal knowledge. She also sees the process of narrative writing as a motivating tool to help teachers become "agents of their own practice" (ibid., p. 35). Such an understanding of agency resonates with Golombek and Johnson's (2004, p. 307) concept of "mediational space." In other words, teachers find in written narratives a way to construct a referential space from which they can develop awareness of their practice.

Another modality considered in this study is spoken. In 1967, Labov and Waletzky (1997, p. 3) created a framework "for the analysis of oral versions of personal experience in English" which influenced the narrative research. The approach to narrative was later designed to improve the efficacy of the framework and sociolinguistic interviews were used instead. In *The Language of Life and Death* (2013), for instance, Labov explains that techniques used in sociolinguistic interviews can be used to elicit oral narrative from participants. These participants become narrators and should have full control of the narrative (Labov, 2013, loc. 284). A similar approach to spoken narrative was studied by Kvale (2007, loc. 1619), who refers to it as "narrative interviews", described in detail in Section 4.3.1.

During the fieldwork participants produced both spoken and written narratives and took part in semi-structured interviews and focus groups (see Section 4.3 for the research methods). In addition, participants were able to choose the mode they wished to articulate their stories in relation to the narrative prompts. Some just wrote their narratives as initially required and others

asked to speak their stories out loud from the prompts. Thus, both modalities were used during the fieldwork. Details of the methods and techniques used can be found throughout Section 4.3.

3.5.4 The interrelation between narrative and teacher cognition

This chapter has discussed the emergence of the interrelation between narrative and teacher cognition. For example, how narrative enquiry has been used to generate an effective methodology through which to study teacher cognition of classroom interaction in the ways this thesis proposes. Also, in the educational field, narrative has been both the method and the methodology to investigate teachers' lives and professional experience, teachers' professional knowledge, thoughts, contexts and working environment, teachers' mental processes and interactional practice, among other ideas (which can be see in Clandinin & Connelly, 1986; Conle, 2000; Gee, 1989, for example). From this list, the use of narrative seems to have a direct connection to the constructs of teacher cognition (e.g., experience, knowledge, thought, and so on).

As noted in Section 2.2, the conceptualisation of *teacher cognition* is as complex as the understanding of *narrative enquiry*, another relationship between both themes. In the literature, the four constructs (*knowledge, thought, beliefs, and decision-making*) have been explored as themes for research and can be traced in the works of Clark and Peterson (1986), Pajares (1992), Freeman (1996), and Borg (2006), among others. Thus, in the tradition of narrative, teachers' mental processes have become an important topic of interest. The constructs of teacher cognition do not usually

appear all at once in one piece of narrative, but they emerge in teachers' stories as individual constructs.

The discussion in Section 2.5, for instance, showed that exploring teacher cognition in narratives can generate other understandings and themes such as reflective practice and teacher experience. Thus, for the purpose of the present study, the use of narrative enquiry resonates with the epistemological assumptions of this qualitative study and the conceptualisation of teacher cognition.

Looking back at the beginning of this research process, I realise that the epistemological, ontological and methodological stances this study aimed to reach, took form and made sense gradually. Narrative enquiry, in my opinion, has naturally built up the qualitative landscape to this study and the adoption of this method with all its meanings make this research more valuable.

The representations of teachers' experiences emerge from all the facets the method brings. Reflecting about this research as a whole, these were important assumptions brought to light from narrative enquiry. First, narrative is studied here as a phenomenon, a method, and a methodology; as written and spoken expression; and accepts sociolinguistic and literary conception (see details below in the conclusive list). Hence, there is a close relationship between the use of narrative enquiry and the notion of teacher cognition examined in this study. Also, teachers' interpretations of classroom interaction are expected to emerge from their narratives. Finally, the social and temporal aspects of narrative have been considered as influential in the

building of teachers' narratives. Thus, aspects such as context, culture, setting, and time cannot be ignored in the stories analysed.

In conclusion, from the discussions above, narrative has two main understandings in this study: narrative as a method, or just *narrative*, and narrative as enquiry. *Narrative* (the written or spoken narrative produced by participants) needs to have a complete sense of a *story* or *response* which reacts to a prompt, theme or question (e.g., *Recall a moment when students were not participating in interactive activities*). It is expected that the participant will answer the prompt in ways in which it is possible to identify the *functional aspects* of the narrative.

In other words, drawing on the sociolinguistic stages (abstract, orientation, complication, evaluation, and resolution), the purpose of the story can be observed to see if it is stating a problem, setting the scene, referring to time/space, evaluating actions, and (perhaps) finding a solution. Also, drawing on the literary perspective of dialogic discourse, the narrative is considered in terms of dialogue with the interviewer who participates in the co-construction of meaning. There will also be references to the terms tale, teller, and addressee throughout the analytical stages.

Narrative as enquiry (the methodological approach to the data), for the purposes of this thesis and in general terms, considers *narrative* as a means by which to understand teachers' experience in terms of their cognition of classroom interaction. More specifically, narrative enquiry takes qualitative and interpretivist lenses to understand the data; has narrative as its main object of analysis; considers narrative as the co-constructed and elicited

outcome of interviews, writings, and discussions, thus having a dialogic and interactive nature; and focuses on language and discourse to interpret the data.

3.5.5 The narrative framework

This section offers a framework for narrative enquiry in order to show the relationship between narrative and the main ideas which underpin this research, that is, narrative, teacher cognition, classroom interaction, teacher praxis and language teaching. Figure 3.1 below symbolises the influences made and received by *narrative enquiry* in relation to these ideas. The figure is presented as a stacked Venn diagram with five concentric circles which have an overlapping relationship.

The circles denote the following ideas:

- Circle 1 – *Narrative Enquiry*: the bigger circle represents the main methodology of this study and encompasses the other smaller circles.
- Circle 2 –*Narrative*: characterises teachers' stories which emerge from their spoken and written narratives, from the interviews and from the focus group discussions.
- Circle 3 –*Teachers' Experience*: symbolises experience as the main goal of narrative enquiry and for this study, it is the broad outcome of teachers' stories. Teachers' experience can be considered in relation to narrative, teacher cognition and teacher praxis.

- Circle 4 –*Teacher Cognition*: represents the four constructs of teacher cognition (knowledge, thought, belief and decision-making) as articulated by teachers in their narratives.
- Circle 5 –*Classroom Interaction*: the innermost circle indicates teachers' own conceptualisation of classroom interaction. As mentioned before in Section 2.3, classroom interaction here is based on teachers' own conceptualisations of the term.

Figure 3.1: Narrative enquiry framework

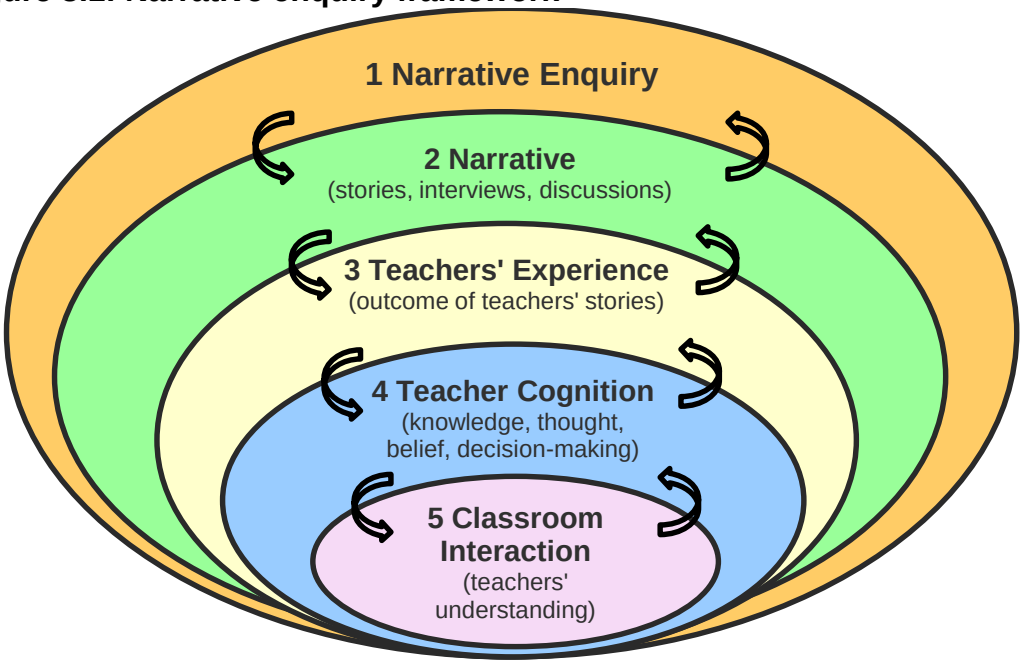


Figure 3.1 above shows that the circles, connected to each other by arrows that depict a cyclical movement from the biggest to the smallest and back. Consequently, instead of a linear sequence of ideas, from the broader to the more specific, the framework proposes that the influences of one idea over another has a reciprocal character. Thus, teachers' understanding of classroom interaction can also affect the conceptualisation of the constructs of teacher cognition, which in turn influence the notion of teachers'

experience and teachers' narratives. The process as a whole outlines how narrative enquiry develops and what narrative enquiry represents for the purpose of this study.

The research processed outlined illustrate how researchers need to consider the benefits and challenges which emerge throughout the course of the investigation. In narrative enquiry, both benefits and challenges seem to compete in parallel, or participate in an interdependent relationship.

On the one hand, benefits are present in the research outcomes, in "the impact of the experience" (Duff & Bell, 2002, p. 209), and in the knowledge which emerges from the narrative research. On the other hand, challenges can emerge at all stages. Thus, there seems to be a battle between benefits and challenges. A turn to narrative enquiry is not mean the simplest way to carry out effective qualitative research, but it has the potential to experience and create inspiring forms of research. Nonetheless, as there is no easy path in research, narrative enquiry can provide both the participants and the researcher with possibilities to expand their views as professionals.

3.6 Chapter summary

This chapter explored the theoretical perspectives which underpin this study. Section 3.2 presented the epistemological and ontological bases of this qualitative study which follows an interpretivist view of the data produced by teachers. Section 3.3 offered the aims and questions which guides the study.

Section 3.4 focused on the nature of narrative as it is conceptualised from sociolinguistic and literary standpoints.

Section 3.5 centred the discussion of narrative enquiry as a means to reach the goals of the research and answer the questions which underlay the research process. The section also offered a narrative framework illustrating the relationships between narrative and other ideas explored in this study. Narrative research has been construed from a combination of perspectives which interrelate and, at the same time, add new meanings to the field. In addition, the umbrella term *narrative enquiry* covers the various nuances and meanings which this study proposed to investigate.

4 Research design

4.1 Introduction

This chapter offers the *research design* which underpins this study. It centres on the procedures which support the methodology work in relation to all the themes and ideas which have been discussed up to this point. Thus, the chapter is organised as follows. Section 4.2 focuses on the participants, the individuals who produced the data and co-constructed the meanings analysed from the narratives. It also describes the ethical procedures undertaken within the research process.

Section 4.3 addresses the methods used to generate meaningful research data (e.g., the interviews, narrative tasks, and focus groups). It also explains the roles of these methods in the iterative process which developed during the fieldwork. Section 4.4 focuses on the analytical process which occurred during and after the fieldwork. It explains the role of discourse analysis in the study and how the analysis developed in cyclical and iterative ways.

4.2 The people and the setting: who, where, and how

4.2.1 Purposive Sampling

This section centres on the sampling, that is, the choice of participants who have a relevant profile for the research. As suggested by Creswell, qualitative

researchers can decide which “purposeful sampling strategy” is best for their studies (2013, p. 154). When developing a qualitative study, researchers need to establish these strategies as they represent meaningful decisions regarding the participants or settings, size of the sample, and choice of methodological tradition (ibid.). In the course of “finding the sample” of English teachers, the participants can be selected by using several types of “purposive sampling” approaches (Newby, 2010, p. 233). In this study, the selection was purposeful, that is, the participants were selected before the fieldwork started, or *a priori*, as suggested in Savin-Baden and Major (2013, p. 314).

One of possible approach is “specialist group sampling” (Newby, 2010, p. 251), where the main objective of the selection is to “obtain insights and understanding that arise through experience.” Lavrakas (2008, p. 554) suggests that *purposive sampling* can also be called “judgmental or expert sampling.” In Lavrakas’ words, the objective is to “produce a sample that can be considered ‘representative’ of the population” (ibid).

This research used the purposive sampling because the teachers selected are experts in the field studied and able to give meaningful input to the study. The purposive or expert sampling was considered an effective choice because the teachers who took part in this research are qualified English teachers with at least six years’ experience. As mentioned in Section 1.1, there are two groups of participants teaching in two different settings: one group teaches on a private English course (or PEC) and the other in public schools of the State and City educational organisation.

Savin-Baden and Major (2013, pp. 312-316) also suggest other aspects to consider when deciding on the sample for research, such as the time, access to and the number of participants, and so on. For example, time refers to when and for how long participants need to be available. In this study, for instance, the teachers were available during a semester (about four to five months). Access to the participants was not highly challenging, since English teaching is my field of work as well. The number of participants (nine) was based on the methodology chosen (narrative enquiry) which suggests a small sample is preferable for in-depth data production. The next section gives further details of the participants.

4.2.2 Knowing the participants and understanding the context

The current research was developed with the participation of nine experienced non-native English-speaking teachers (NNESTs). Although this term is contested, for the purpose of this study, the idea of NNEST does not mean that teachers from Brazil (where English is a foreign language) are less efficient or have fewer advantages than native English-speaking teachers (NESTs). As pointed out in Evison and Bailey (2016) in a paper on “teachers’ attitudes to English” there is still a debate about “the usefulness of the native-speaker/non-native speaker dichotomy.” This study also agrees with Brown and Lee’s (2015, p. 165) notion that “the most important qualification for a teaching position is *training* and *experience* in teaching languages” not the teachers’ own language background.

The participants had been teaching English for at least six years and they come from two main contexts in which English is taught as a foreign

language (EFL) in Manaus (Amazonas): the PEC and the public school. Although the contexts are different in their physical and social organisations, all the participants from both contexts hold at least a degree in English, and agree that communicative language methodologies are present in their teaching practice. Chapters 5 and 6 offer further details about the participants and their data production.

The five PEC participants teach EFL in courses ranging from beginner to advanced (the PEC courses last about four and a half years); they have a maximum 18 students per class and they work in modern classrooms with multimedia resources such as electronic whiteboard, projector, and surround sound. In the PEC, English language class time can vary from 3 to 6 hours per week, depending on the level or purpose of the course, and teachers can teach from three to nine different groups during a semester. In addition, all the PEC teachers are required to participate in an ongoing teacher development programme provided by the school; due to new institutional demands, teachers have also been asked to have a specialisation level in EFL teaching.

In the public school context, the four participants teach EFL classes mainly at a basic (beginner) level, but up to intermediate in some cases. They have about 40 students per class, and work in standard whiteboard classrooms and sometimes have access to some media equipment such as projector, TV set, and sound equipment of some sort. In the public school, each class lasts 50 minutes and takes place twice a week as part of the regular school curriculum: teachers need to teach nine groups (a week) to meet their

mandatory hours of weekly work. Additionally, public school teachers are sometimes required to participate in teacher development programmes offered by the City or State Board of Education. Some teachers have a specialisation level in EFL teaching (see information about the context in Section 1.4).

The selection of these nine teachers was based, first, on their choice to participate; second, on their experience (minimum six years); third, on their school settings. Here, purposive or expert sampling (Creswell, 2013) seemed to be an appropriate choice since the participants were expected to produce insights into their teaching experience through the interviews and narratives (Savin-Baden & Major, 2013). This was also a *knowable sample*, because as a University teacher, having taught in the English department, I had had the opportunity to work with most of the participants as their teacher, trainer, or colleague. Other participants were suggested by their peers and accepted the invitation to take part in this study.

4.2.3 The ethical procedures

In compliance with the ethical guidelines of the British Educational Research Association (BERA, 2011), neither the identity of the participants, nor the names of their schools are revealed in any part of this thesis, that is, their anonymity, confidentiality and non-traceability are guaranteed. Thus, to preserve participants' anonymity, they were allocated random names for the purpose of this study (Eduardo, Lidia, Flora, Leonor, Marco, Natalia, Barbara, Teresa and Nina). However, participants from the same context (e.g., public

schools or PEC) knew about their peers' participation in this research, especially through the focus group meetings.

Participants were free to choose the language to be used in the meetings (individual interviews or focus groups), that is, they could use either English or Portuguese, or even a mixture of both languages to respond to the researcher. The teachers' participation was completely voluntary, and they had the right to withdraw from the study without any consequences as long as their withdrawal took place before the publication of this work (see the Research ethics documents in Appendices 3-6).

The meetings with participants for interviews and focus groups were audio and video recorded with their agreement. All the data produced in this field research are stored either digitally (audio, video) or in written form, including my field notes and are in my archives or my personal computer. The only people that have access to them are my supervisors and me. These files will be erased by the end of 2020.

4.3 Research methods and researchable actions

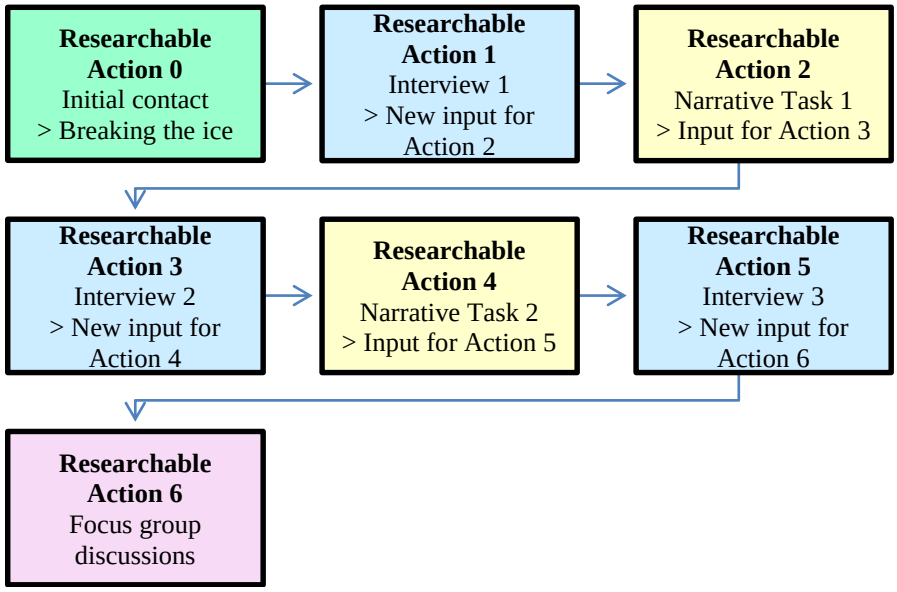
The process of producing the data was organised to be iterative and cyclical. Each stage is referred to as a *researchable action*, and each action corresponds to a method (see Figure 4.1 below). As stated earlier, three main methods were used in the field: the narrative, the interview, and the focus groups. All these methods were used to help the participants produce a narrativised version of their stories. The interviews and narratives

complement each other as researchable actions throughout the fieldwork development and the focus groups were intended to close the research process (all the stages are explained in the next sections).

I coined the term *researchable actions* inspired by Freeman's (1998, p. 61) conceptualisation of "research-able questions." In Freeman's view, when teachers develop research they need to ask two types of questions: the "teaching" and the "research-able" questions (ibid.). This latter type, in Freeman's words, represents open-ended questions which focus "on others, (…) not on the questioner" (ibid). In the current study's iterative development, the concept of *researchable* (or research-able) relates first, to the principle that each action has the quality and possibility of being researched independently or in combination with others. Second, the researchable actions refer to others (the participant teachers), not to the researcher herself.

Figure 4.1 below shows how the iterative process functioned during the fieldwork. It starts with the *Researchable Action 0* (zero), followed by three interview stages – alternated with narrative tasks, and closes with the focus group discussions.

Figure 4.1 The researchable actions: interviews, narrative tasks and focus group discussions



As seen in Figure 4.1 above, there are seven researchable actions (RA), from 0 to 6. The first action (RA 0) is the starting point of the fieldwork, the first contact with the schools and the teachers. Before the process of data production started, I visited the participant teachers in their school environment. This introductory meeting was used to learn about the participants' routine working environment in order to organise a research schedule and to fulfil the ethical requirements such as presenting the research information sheet and consent form. It was also an opportunity to meet school principals and head-teachers to receive permission to carry out the fieldwork with the participants.

The RA 1, 3, and 5 refer to the interviews with participants that were recorded and where they had the opportunity to talk freely about their practice. These interviews had thematic questions to guide the participants' stories and they are here considered sociolinguistic or narrative interviews.

The interviews were also used to clarify ideas discussed in previous meetings with the teachers (Section 4.3.1 explains these ideas in detail).

The RA 2 and 4 relate to the narrative tasks. The tasks were prompts given to teachers to initiate and guide their thoughts about their practice. In these stages teachers were given two options for producing their narrative. They could write a response to the prompt (in their own time) or they could speak to the researcher (as in a narrative interview) by responding to the same prompt. Several participants chose the second option because it demanded less time from their work commitments (Section 4.3.2 explains the narrative task procedures).

Finally, RA 6 refers to the focus group discussions. The discussions were the most challenging part of the process because they depended on having all the teachers from a determined context together. The main goal of the focus group discussion was to conclude the research process. The teachers met to discuss the main themes which were presented as prompts (Section 4.3.3 describes these procedures in detail). The next sections present detailed explanations of the three researchable actions (interview, narrative task, and focus group discussion).

4.3.1 Narrative interviews

In the development of this study, the data produced in the interviews were used to prompt the next research action. The first interview was the starting point into teacher's minds and practice and used to establish a rapport with the participants. Through the subsequent interviews, with each individual

teacher, it was possible to later clarify specific points from the previous interviews, or in the preceding written and oral narratives, and to keep a closer contact with teachers.

In interviews, as speech events or conversational actions, knowledge and meaning are co-constructed (built together) by both the interviewer and interviewee. For example, the participants' own voice is perceived, but the interviewer is in charge of asking questions – which questions to ask, as well as when, why and how to ask the questions. Therefore, as the researcher, I acknowledge my participation in the production of meanings presented here and agree that it is necessary to understand "the discursive nature of the interview process" (Mishler, 1986, loc. 788) and the co-construction of knowledge which occurs in the research process.

Even if there is a shared understanding, among scholars, that interview is a common research method, in this study, as mentioned above, it is perceived as more complex than the idea that an interview happens whenever "a researcher asks someone else questions" (Newby, 2010, p. 338). Thus, this study takes the view that in research, both interviewer and respondent are reciprocally responsible for the understandings and for the generation of meanings.

During the fieldwork of this study, there were mainly semi-structured, face-to-face interviews, and narrative interviews (also called sociolinguistic interviews). A *semi-structured interview* is guided and controlled, with the occasional addition of questions for clarification of any points made by participants (Newby, 2010, p. 339). It can also become very interactive and

conversational, even though there are pre-established questions. A semi-structured interview can also be *face-to-face*, that is, the participant and interviewer interact in person. The term differentiates between interviews made by telephone, email, or any other media (such as WhatsApp, social media, etc.). However, the use of Skype can be somehow considered a type of face-to-face interaction since the conversation is live and participants can see each other in real time as well.

A *sociolinguistic interview* or *narrative interview* (from now on interchangeable terms) was also used to elicit spoken narrative from participants, the narrators of the story. This interview technique was used to contribute to the building of the narrative enquiry. The face-to-face contact with participants and the conversational aspects of the semi-structure (not restricted to fixed questions) and narrative interviews (which allows the interviewee to take the floor) generated the safe environment necessary for a qualitative study to progress. The narrative interviews focused on the oral narrative of personal experience (also discussed in Section 3.4), which resonate with Riessman's (2008, p. 23) idea that "the goal in narrative interviewing is to generate detailed accounts rather than brief answers or general statements" (ibid., p. 23). The interviews developed from general teaching topics to specific narrative prompts and tasks (see narrative tasks in Section 4.3.2 below). The technique consisted of eliciting a narrative or as Kvale (2007, loc. 1633) suggests, letting "it come up spontaneously." However, the interviewer can also function as a "co-producer of the narrative" (ibid.), as mentioned above.

The interview questions focused on teachers' experiences in the classroom. However, there were also questions related to teachers' routines and professional contexts to generate understanding about teachers' lives at school. Since the interviews were semi-structured and sociolinguistic, with the main objective of letting the teachers take the floor in the conversation, there was no specific list of previously established or fixed questions. Instead, I worked with the main topics (i.e., classroom interaction, use of mother tongue, etc.) which guided me while asking participants to talk about their experience. This strategy helped create a natural atmosphere and spontaneous conversations with the teachers in this stage of the research process.

Working from a thematic perspective also supported the analytical process which was to come next, that is, some of the analytical themes or codes used in this research were closely related to the topics of enquiry during the interviews. For example, the questions guided teachers to talk about their teaching background and current work, why they decided to become language teachers, their views of classroom interaction, use of mother tongue (L1) during interactive activities, use of L1 in the English classroom, reflective teaching and teachers' awareness of their practice. Some of these questions, for instance, the use of mother tongue, was also considered as a theme for analysis (for analysis refer to Chapters 5 and 6).

In the first recorded interview, for instance, the participants were asked about their past and present teaching experience. Questions elicited their thoughts about their decision to teach English, their teaching background (e.g.,

schools they had worked for in the past), and their current teaching settings (e.g., school environment, resources, regulations, etc.). This interview was also the first opportunity to listen to teachers talking about classroom interaction, the use of L1 and L2 in the language classroom, and teachers' classroom practice in general (Appendix 7 has examples of these themes).

All the interviews were audio and video recorded and created a rich source of material which could be revisited and transcribed later, as suggested in Freeman (1998, p. 94). The interviews were also translated into English when necessary, that is, whenever the participants delivered their data in their mother tongue. Both audio and video material were valuable tools in the data analysis of the interview transcription because they carried information beyond the words said, such as pauses in speech, facial expressions and gestures (or their body language).

The transcriptions were originally made in the language they were delivered and translated when needed. I acknowledge the issues of representation and accuracy which emerge from both the transcription and translation which can lose some of the original meaning of the data produced. Thus, I consider that the transcription and translation made by me are in fact a good representation of the participants' voice since "transcripts will never fully capture communications as it unfolds in real time" as Jenks (2011, p. 9) puts it.

In summary, throughout the period when data was being produced, the teachers participated in three main interview sessions. The face-to-face sociolinguistic (or narrative) interviews were alternated with the production of

narrative – the response to the narrative tasks or prompts - which could be spoken or written (see Section 3.5.3 for the narrative modes) in an iterative process (detailed in Figure 4.1). In the next section the narrative tasks are explained.

4.3.2 Narrative tasks

As pointed out in Section 3.5, the term narrative as a research method refers to the representation of teachers' stories which involves a complete response to a prompt (explained below). It is also interpreted in this thesis as referring to the spoken and written stories generated during the fieldwork. Teachers were able to choose the narrative mode (written or spoken) in order to facilitate their participation in the research process. In the case of the spoken mode, participants had full control of the narrative and were able to have the floor during the conversation about the task, as suggested in Labov (2013) and Riessman (2012).

In the progress of the researchable actions (see Figure 4.1 above), *narrative tasks* appear as action (or RA) 2 and 4, alternating with the narrative interviews. They were created to help teachers reflect on their practice, recall teaching moments and narrativise their thoughts from prompts. Thus, the tasks refer to the outcomes of the narrative prompts (written or spoken) which were specifically related to their classroom practice.

The term *narrative task* was chosen because most EFL teachers participating in the research were expected to be familiarised with Task Based Learning (TBL) and have certain knowledge of concepts such as task outcomes and

the negotiation of meaning. Nunan (2004, loc. 122), for instance, drawing on several authors, concludes that the "task should also have a sense of completeness, being able to stand alone as a communicative act in its own right with a beginning, a middle and an end." This definition refers to classroom activities, but it notably resonates with the concepts of narrative and suits the goals of this study to be used as a research technique.

The *narrative prompts* consisted of a classroom situation followed by questions from which participants reflected upon their own practice. They appear on the participants' sheets as part of the *narrative task* (see Appendix 8). The idea of the prompts draws on Barkhuizen and Wette's (2008) use of narrative frames. The templates for the prompts used for the purpose of this study do not emulate the frames designed for their research aims. However, the use of prompts resonates with their suggestion that "the frames ensure that the content will be more or less what is expected (and required to address the research aims) and that it will be delivered in narrative form" (ibid., p. 376). In this study, the term prompt is used with similar intentions, that is, to guide teachers in their thoughts and reflections during the production of narratives.

Together with the narrative task, as an optional activity, the teachers were asked to write a *narrativised report* referring to their own classroom situation to be recalled, described and reflected upon. The participants were asked to log a time during their class (by writing notes or audio recording the moment) in which their students performed an interactive activity. This researcher had no access to such recordings or notes, which were only used by the

participant as a reference for the specific classroom moment they wished to report. In other words, the teacher's referred to their recordings to discuss, question, (re)interpret, and report a situation.

The narrativised report had a prompt which was very similar to the narrative prompt, so that teachers could have a sense of systematic reflection on classroom interaction. Also, in the case where a teachers was not able to log an activity, there would be no loss in terms of data production. The report of an interactive moment aimed at a focused view of the classroom interaction fresh in the mind of the teacher. The production of reports were also counted as narrative.

There were three main purposes in the *narrative tasks* adopted in this study: the generation of a familiar process (use of tasks), the co-construction of meanings and knowledge (narratives and reports), and the maintenance of the research focus (teacher cognition of classroom interaction). Thus, the use of tasks facilitated teachers' engagement in the reflective process since they were commonly required to reflect about their teaching as part of their professional routine; the participants were able to co-construct knowledge from their own perspectives through the given prompts and recalls (their memories of classroom actions); and the research focus was maintained since the tasks helped participants concentrate on students' interaction, teachers' actions and re-actions, and so forth.

The discursive meanings which emerged from the tasks helped develop the iterative research process. In other words, the outcomes of the narrative tasks were combined with the next narrative task and/or with the subsequent

interviews giving a sequence of new dimensions and researchable actions in the generation of the data. These sequential researchable actions can be observed in Figure 4.1 (above).

4.3.3 Focus group discussions

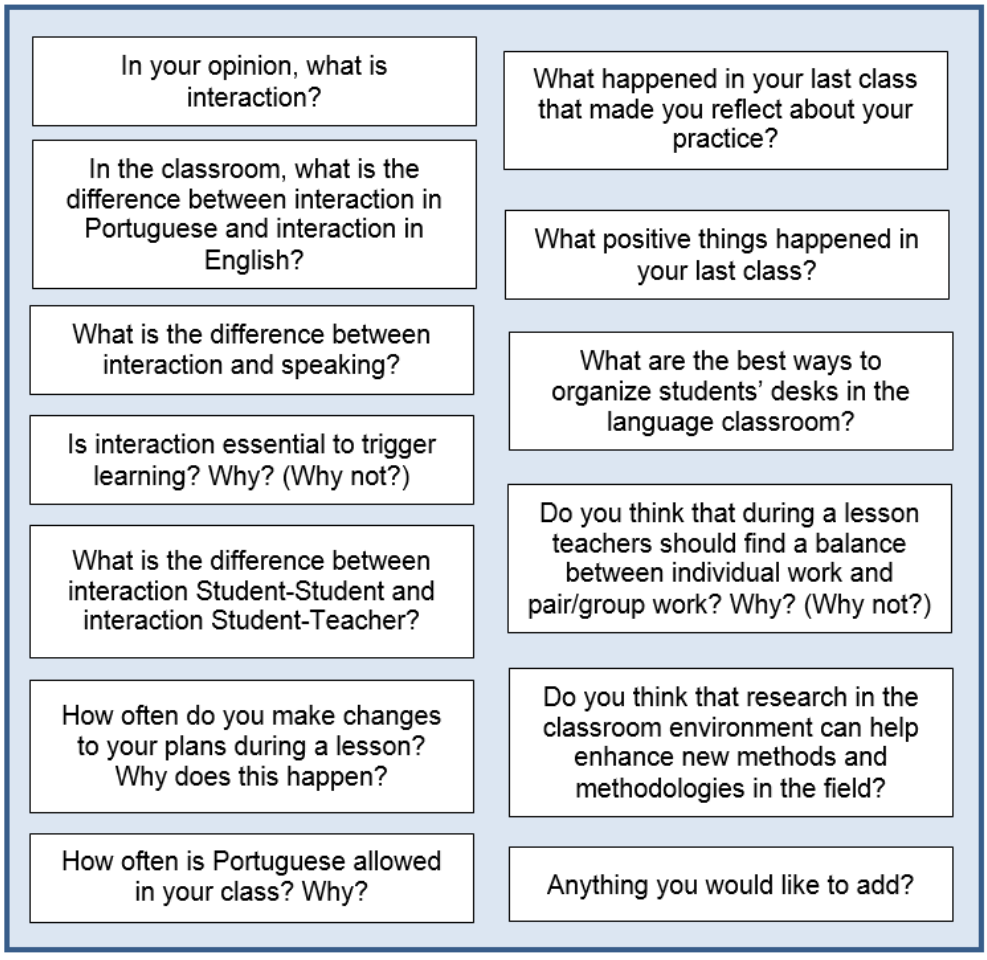
The *focus group discussions*, or focus group meetings as seen in Newby (2010, p. 350) were designed to take place by the end of the fieldwork process as a follow-up and closing activity. As mentioned above, this researchable action depended on the teachers' availability to meet up together. The participants received a set of questions to be answered in the group. They decided the order the questions should be answered, and how to answer them (see Figure 4.2 below). The researcher only intervened to ask for clarifications and to motivate participants who were too quiet to engage in the discussion.

Focus group can be considered as a "non-directive style of interviewing, where the prime concern is to encourage a variety of viewpoints on the topic in focus for the group" (Kvale, 2007, loc. 1608). In focus groups there is a mediator – e.g., the researcher or one of the participants – who introduces a topic and mediates the discussion, if necessary. In this study, during the focus groups meetings there was no appointed formal mediator, but the researcher sometimes intervened to facilitate the dialogue or to ask for clarification at some point in the discussion.

Prompts were used in the focus groups discussions (Figure 4.2 below) which explored the main ideas related to this research purposes (e.g., teacher

cognition, classroom interaction, use of L1 and L2, and so on). They also related to classroom management and the decisions teachers made in relation to interactive activities. Other themes such as reflective practices, and themes which emerged during the research process were also included in the questions. Some examples of the prompts are in Figure 4.2 below, and in Appendix 9.

Figure 4.2 Example of focus group discussion prompts



As Figure 4.2 above shows, the first five questions in the boxes on the left refer to classroom interaction, but they also elicit the constructs of teacher cognition. The 6th and 7th questions and those on the right aim to provoke teachers' perceptions of classroom management, language learning and

teaching methodology by exploring topics such as the use of mother tongue, pair work, and organisation of desks in class. The question about research and field development plays a different role in the focus group discussion. It aimed to stimulate teacher cognition about the future of their profession, stimulate some interest in research, and learn about teachers' view of research which is developed in their teaching environment.

There were two stages of focus group discussions due to teachers' different schedules. The PEC teachers were able to have two meetings and the public school teachers could only have one. The first PEC discussions were fragmented into a group of three and another group of two, but the second meeting had all five PEC teachers present. Only two of the four public school teachers were available to take part in the focus group stage. The data produced in the focus group discussions were used throughout the analysis of those who participated in the meetings.

4.3.4 What the teachers produced

I spent a semester (January to June 2014) working with the participant teachers and during this period, I visited them in their schools for their interviews, oral narratives, and focus group meetings. From the nine participants, the data produced formed a corpus of more than 100,000 words which was transcribed (if spoken) and translated (if in Portuguese). The data produced in Portuguese and referred to in this thesis were translated to English for the purpose of the reader's understanding. In Section 4.3.1, I refer to the underlying issues in the use of transcription and translation which can affect the representation of the data. Therefore, in the analysis chapters (5

and 6), when applicable, the translated narrative is followed by a box with the original version in L1.

In each setting, I gathered information about the school environment, administrative structure, number of students, and teachers' timetables. The first individual meeting with teachers happened right after the semester started (see *Researchable Action 0* in Figure 4.1) and the other meetings occurred throughout the semester. In general, interviews ranged from 25 to 45 minutes each, oral narratives lasted from 30 to 60 minutes each, and focus group sessions lasted about 60 minutes.

The main focus of this research was the teachers as individuals and as members of a teaching community. The data analysis centred on what teachers know, think, believe and decide about classroom interaction in order to answer the research questions which underpin this study. Although I met some of the participants' students whilst visiting the schools, they did not take part in any stage of the research process. Thus, the voices of the learners are only represented in their teachers' narratives, that is, through the teachers' voices. I understand this might appear as a limitation of the research design, but I believe that it represented a research choice which enhanced the meaningfulness of the teachers' voices which was, in fact, the main focus of this study. In Chapters 5 and 6, I return to this idea of teachers and students' voices which can be better understood within the data analysis.

In this qualitative enquiry, some procedures were established before the fieldwork started and others decided on as the data generation developed. There were several analytical stages which are discussed in the next section.

4.4 The analytical process: description and thematisation

In the last two decades, there has been a search for meaningful ways to analyse narrative. As stated, throughout Chapter 3, teacher's lives and professional experience, as well as teacher cognition, have been the subjects of study in narrative enquiry. These studies have generated a great range of analytical frameworks such as those presented in De Fina and Georgakopoulou (2012), Grbich (2013), or Clandinin and Connelly (2000), among others.

De Fina and Georgakopoulou (2012) and Grbich (2013), for example, have explored the analysis of narratives from an inclusive perspective, using approaches drawn from sociolinguistic, discourse studies, structural or auto-ethnographic standpoints. Such a comprehensive perception of narratives seems to be what researchers have found to yield meaningful results.

In the search for meaningful research outcomes, this study also makes use of an inclusive analytical perspective to understand teacher's narratives. Section 3.4 shows that in order to understand narrative this study draws on ideas from sociolinguistic and literary fields. These perspectives are combined with elements of discourse analysis to complete the analytical process.

Thus, this section focuses on the design of the analytical process of this study and is organised as follows. Section 4.4.1 discusses the role of discourse analysis in this study. Section 4.4.2 explains the cyclical process

which occurred in the analytical stages. Section 4.4.3 describes the procedures of initial analysis which occurred during the fieldwork, and Section 4.4.4 explains the further stages of analysis.

4.4.1 Discourse analysis

Although the main approach to the data was based on narrative enquiry, this study also uses elements of discourse analysis (DA) to develop the analytical process. In basic terms, discourse analysis studies language in context and sometimes can be considered a comprehensive term which involves talk and interaction. The main assumptions regarding discourse analysis which guided this study are as follows.

Discourse analysis (or DA) “is concerned with the study of the relationship between language and contexts in which it is used” (McCarthy, 2002, p. 5). As McCarthy (2002, p. 5) explains, discourse analysis is also concerned with the idea of language in use, that is, “written texts of all kinds, and spoken data, from conversation to highly institutionalised forms of talk.” Adding to this idea, Gee (2011, p. xi) suggests that DA can concentrate on “details of speech (…) that are arguably deemed relevant in the context where the speech was used.” He also sees DA as discourse in Discourses, since there is no meaning to language if not within social practices.

Thus, this study examined authentic data produced in its research context, taking into consideration issues such as the co-construction of meanings from the interaction “between and among speakers” (Lazaraton, 2009). Thus, as mentioned, the purposes of this study involved elements of discourse

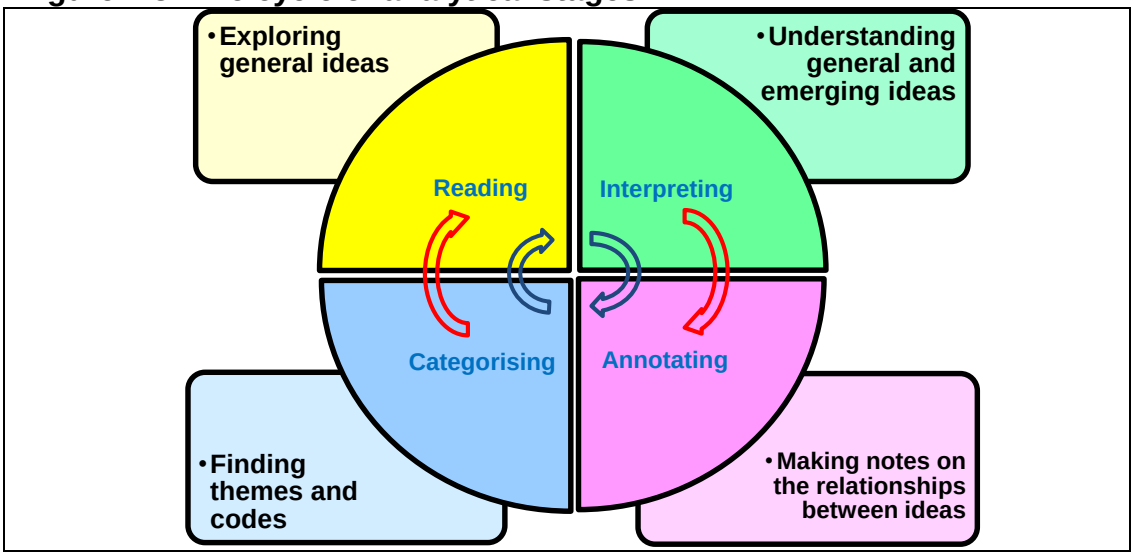
analysis. Throughout Chapters 5 and 6 these elements of DA are shown in the data analysis, especially in the interpretation of the emerging themes.

4.4.2 Cycles of analytical stages, narratives and episodes

The development of this research had a cyclical nature. This can be observed in the data production which followed an iterative progression (Figure 4.1, in Section 4.3) and in the analytical stages which followed in a cyclical course, as well (Figure 4.3 below). Thus, there was an initial analysis during the fieldwork which was part of the iterative process and there were further stages of analysis after the fieldwork had ended. These two stages are described in Sections 4.4.3 and 4.4.4, respectively.

Figure 4.3 below shows how the analysis developed in these two stages. The analytical cycle in the figure below is drawn from Creswell's (2013, p.182) model of data analysis, or the "data analysis spiral."

Figure 4.3: The cycle of analytical stages



Drawn from Creswell (2013)

In the figure above, the outer arrows (larger, red arrows) represent the first general approach to the data – the initial analysis – and the inner arrows (smaller, blue arrows) represent the subsequent, detailed analysis. This resonates with the idea that the data can be categorised and coded several times until it has a clear labelling (Savin-Baden & Major, 2013).

Both stages follow a similar cyclical pattern of reading, interpreting, annotating and categorising. In brief, *reading* and *interpreting* are interrelated – the former focuses on general ideas and the latter on understanding both general and emerging ideas; *annotating* refers to the notes about any meaningful emerging aspects in the narrative; and *categorising* relates to the organisation of the narrative data into themes or codes.

After all the data had been generated, the audio recordings were transcribed to enable the organisation and management, and further analysis of the data (Creswell, 2013, p. 182). Having transcripts facilitated the manipulation of the narratives (as *physical texts*) and consequently of the cyclical analytical process (Section 4.3.1 also discusses the use of transcriptions).

I chose to use a “hands-on approach” to the data analysis (Savin-Baden & Major, 2013, p. 431) for three main reasons. First, I understood that the complexities of the concepts studied here required a cyclical procedure and that required extensive contact with the data than a mechanical exploration. Second, as I am not an experienced field researcher I thought I would benefit more from the “by-hand method” (ibid.) than if I used a computer programme in the process. Finally, I wanted to learn an approach to the data which I would be able to use with my students on my return to Amazonas, where

some technological advances are still not available to all the academic community. Therefore, I did not use any analytical software, such as NVIVO, in this research process, but I believe I gained invaluable experience with the hands-on method I have used.

In the further stages of analysis, I was able to organise the transcribed data in several ways, that is, by participant, by narrative mode (written or spoken), by method (interviews and narratives), and so on. These multiple ways of organising helped me see what the data represented. The data were iteratively read, interpreted, annotated, and categorised into themes and codes. Thus, the long list of themes from the initial analysis was gradually categorised into a shorter list of both pre-determined and emerging themes (see Tables 4.1 and 4.2 below for examples of these themes).

In this cyclical process, narratives were seen in two different ways. In the initial analysis, they were simply examined as whole **narratives** in the general sense, that is, the written or spoken narrative produced by participants, which had a complete sense of a *response*, or a reaction to a prompt, topic or question, as established in Section 3.5.4. However, in the later stages, narratives were looked at in detail and were also organised into smaller sub-parts which I refer to as the **episodes of narrative**.

For the purpose of this study, *episodes of narrative* represent a coherent narrative unit within a complete narrative, or a smaller unit of a narrative. The notion of narrative unit is drawn from Gee's (Gee, 1986, 1991) who examined units of spoken narrative and analysed them by *units* such as "lines, stanzas, strophes and parts" (Riessman, 2008, loc 2206). In this study, I refer to the

unit analysed as an *episode*. Other related terms, namely *extended thinking episode* and *extract of thought*, for instance, also occur in the analytical chapters. The former refers to a whole episode representing a thought (as a construct of teacher cognition), whilst the latter relates to an episode unit (a sentence or utterance) also representing the articulation of a thought.

Sometimes teachers' responses to a question or prompt developed in long narratives. In order to facilitate the narrative analysis, these narratives were broken into sub-parts (episodes) which also responded to the question and had complete coherent sense. Appendix 10 offers a good example of this relationship between narrative and episodes. Questioned about the use of mother tongue in his class, the participant Eduardo develops a long narrative to answer the question. Then, considering the sub-parts which emerged from his talk, I was able to divide the narrative into four episodes: 1) how he balances the use of L1 and L2, 2) how children of different linguistic levels react to both languages, 3) how he persuades students to use the target language, and 4) how he tries to do it naturally (see Appendix 10 for the complete narrative and its episodes). I argue that this strategy of separating narratives into episodes facilitated the analysis and was made possible because of the cyclical approach to the data.

4.4.3 In the fieldwork: the initial analysis

During the process of generating the data in the field, it was necessary to go through the participants' written and recorded data (interviews and spoken narratives) in order to follow the iterative process mentioned in Section 4.3. This process was part of the initial analysis (in the previous section) which

helped shape new or clarifying questions to be used in the next meeting with each teacher (see Figure 4.1 for the iterative process).

This initial analysis focused on the general idea of teacher cognition and its four constructs (knowledge, thought, beliefs and decision-making) and on classroom interaction, but was not limited to them. In other words, if any meaningful elements emerged in the reading and interpretation of the data, they could be included and later categorised (or coded) if applicable (see Figure 4.3). The initial analysis occurred as explained below.

First, the data was organised according to which respondent teacher had produced it, in order of participation, and in two groups, the PEC and the public school (Sections 5.1 and 6.1 explain this organisation). Then, the narratives and interviews were read or listened to (during the fieldwork the transcripts were still in preparation) and then followed the cycle of analytical stages (in Figure 4.3, in Section 4.4.2). The narratives were read and interpreted in terms of representing general ideas of teacher cognition and classroom interaction (CI), or the relationship between the four constructs and CI. Then, they were annotated for meaningful understandings and categorised into the two main, *pre-determined themes*: teacher cognition and classroom interaction. Section 4.4.5 offers the details for the thematic organisation of this thesis.

4.4.4 After the fieldwork: the subsequent analyses

After the fieldwork, the analysis followed the same systematic and cyclical pattern presented in the initial analytical stage, but now the focus expanded

into the emerging themes. This further analysis developed in two new stages. The first stage maintained the initial or pre-determined themes established in the initial analysis, that is, the individual constructs of teacher cognition in relation to classroom interaction. The second stage centred on the emerging themes analysed in relation to the discursive strategies (see definition in Section 4.4.5). Table 4.1 below offers an example of the first stage of the analysis (Chapters 5 and 6).

Table 4.1 Examples of analytical stages: the articulation and interpretations of the constructs of teacher cognition

Teacher's articulation of…	Teacher…	Teacher shows the relationships between
Knowledge	is knowledgeable of…	knowledge and interaction by
Thought	thinks about…	thought and interaction by
Beliefs	believes…	beliefs and interaction by
Decision-making	decides…	decision-making and interaction by

As seen in Table 4.1, at first all the four constructs were analysed individually for each of the participants of the PEC and of the public school. In Chapters 5 and 6, there is an individual table for each construct, but for the purpose of this explanation, I have inserted all the constructs into the single table (4.1) above. At this stage, the focus of the analysis is teachers' articulation of the constructs of teacher cognition through their narratives, and the relationship between the constructs and teachers' own ideas of interaction which emerged in the analysis (see Section 4.4.5 for the coding). The term *articulation* is here considered in simple terms as the ways teachers express an idea, feeling or thought in spoken or written language (CALD, 2003).

The next stage, as noted above, focused on the emerging themes which related to each construct of teacher cognition and to the discursive strategies used by teachers whilst telling their stories (see Table 4.2 below). The emerging themes, as the term suggests, were revealed from the data analysis and are explored in detail in Chapters 5 and 6. However, for a better understanding of the analytical stages, I introduce and explain them throughout this Design Chapter. They represent the condensed list of themes mentioned in the previous section, and the next section explains these themes.

Table 4.2 Examples of analytical stages: the emerging themes

Discursive strategies in the interpretation of knowledge, thought, beliefs, decision-making
Emerging themes
Generalisation
Shared knowledge
Uncertainty
Evaluation
Articulation of teachers' voices
Articulation of students' voices

Table 4.2 presents six discursive strategies which were considered as emerging themes. They are: generalisation, shared knowledge, uncertainty, evaluation and articulation of teachers and/or students' voices. Next section (4.4.5) describes how the thematic analysis was developed. Then, Section 5.3.3 shows how the pre-determined and emerging themes were analysed.

4.4.5 Understanding the thematic analysis

This section describes the thematic analysis developed in this thesis. In brief, *thematic analysis* is defined in Savin-Baden and Major as "a method of identifying, analysing and reporting patterns in the data" (Savin-Baden &

Major, 2013, p. 439). In other words, the patterns are the themes which emerge from the data analysis.

In this study, the thematic organisation initially related to the first stage of analysis, that is, to the four constructs of teacher cognition and classroom interaction (see Table 4.1 above). This thematic analysis was then extended to include three types of relationships between the constructions and interactions. Finally, the thematic organisation incorporated further stages of analysis related to six emerging themes reflecting discursive strategies (see Table 4.2 above). The constructs of teacher cognition have been described in Section 2.2, but here they were considered in the coding system as themes for the analytical stages. Chapters 5 and 6 offer detailed examples of all the themes presented here.

- **The four constructs as topics for analysis**

Knowledge relates to professional, academic and pedagogical knowledge (See Ben-Peretz, 2011) and is evidenced in the language and metalanguage used by teachers to describe their actions, beliefs and awareness. In simple terms, as seen in Section 2.2, metalanguage is the technical or linguistic language used to talk about language (McCarthy & Carter, 1994). For example, metalanguage can be found when teachers talk about their academic knowledge, “there's lot of research that proves or shows that interaction is the key to learning” (Leonor, Int. 3). Whilst knowledge can be identified in the verb *know*, it is not very common in the data for teachers to express their knowledge by saying ‘I know’. Section 5.3.2 presents further information about the analysis of knowledge.

Thought is a complex construct and as a theme, it is challenging to interpret because it can refer to several other constructs. It can represent teachers' ideas about planning, thinking, believing, and so on. In addition, knowledge of theories and beliefs can influence teachers' thoughts and, consequently, the ways they express themselves in the narratives. It can be represented by the verb *think* or just implied in the context, e.g., "I used several 'flashcards' because that was the material I had available at that moment" (Natalia, Narr. 1). In this study some terms are used in the analysis only in relation to thought (e.g., *extended thinking episode* and *extract of thought*) and are explained later in this section. Section 5.3.4 offers further explanation and examples of thought as explored in the analysis.

Beliefs relate to mental processes such as attitudes, judgments, opinions, and others. Thus, the difficulty lies in finding excerpts which are clear examples of teachers' beliefs. Sometimes teachers use the verb *believe* and that facilitated the coding, e.g., "I believe my classes have to have a goal to be accomplished" (Marco, Narr. 2). Sometimes other verbs such as *think* can be also interpreted as a suggesting beliefs. Section 5.3.5 describes how this construct was analysed in detail.

Decision-making refers to expressions reflecting decisions which teachers made in their narratives before, during and after the lesson. Sometimes it could be construed from the verb *decide* or just suggested in the actions described which related to classroom actions such as standing, talking, walking, and so on, e.g., "students' comments make me change my approach so many times…" (Leonor, Int. 1) is a clearer indication of what

contributed to decision-making. Section 5.3.6 explains the analysis of this construct in detail.

- **The relationships between the constructs and interaction**

In the thematic analysis, the idea of interaction is interpreted in this study as any exchange which might happen in the classroom as described or discussed by teachers, that is, it can be student-student, teacher-students, oral or non-oral interaction, or any other type of exchange which aims to lead to learning in the language classroom. The relationships between the four constructs and interaction refer to the ways teachers define, exemplify and position themselves in relation to interaction. The terms – here referred to as *definition*, *examples*, and *positioning* – are self-explanatory, but for the purpose of this section they are explained as follows.

Definition refers to the meanings and descriptions given by participants to the idea of classroom interaction. In their narratives and interviews, the teachers were asked about their own ideas about interaction and their responses were coded as definitions, e.g., “[interaction] is the moment we all have to use the target language” (Flora, Int. 1).

Examples refer to the ways teachers illustrated or represented interactive activities, or their own view of interaction. It occurred with or without expressions like *for example* and *for instance*, e.g., “with this group I felt, for example, that this semester we have studied units 1 and 2 (…)” (Eduardo, Int. 2).

Positioning refers to teachers' attitudes towards classroom actions. Sometimes teachers express their own standpoint on a teaching topic, but sometimes, this was not clearly identifiable in the text. Teachers' positioning toward interaction can be embedded in teachers' beliefs and knowledge, e.g., "It's difficult. It's what I am saying, they create a barrier" (Nina, Int. 1). In brief, this study interprets *positioning* as teachers' individual assumptions about how interaction operates – or fails to. This links to Ribeiro's view that positioning "orients talk in a given direction (where meaning can be disputed, refuted, negotiated)" (Ribeiro, 2006, p. 50). This study also considered teachers' positioning towards the use of L1 and L2 in interaction.

- **The discursive strategies**

In their narratives, the teachers used individual strategies to tell their stories which were interpreted as discursive strategies and examined as emerging themes. For the purpose of this study, we draw on McCarthy and Carter's (1994) notion of discourse strategy is used to explain *discursive strategies*. Therefore in this study, discursive strategies refer to

> the choices made by the speaker/writer at all stages of production which pay regard to how the receiver will experience the message, what speech acts are necessary and desirable, which patterns of interaction are appropriate, and so on. (McCarthy and Carter, 1994, p. 177)

The idea of discursive strategies this study considers also resonates with Tannen's notion of "involvement strategies," or "speakers' ways of shaping what they are talking or writing about" (Tannen, 2007, p. 42). In the analytical stages, six strategies were considered: *generalisation*, *shared knowledge*,

uncertainty, *evaluation* and *articulation of teachers and/or students' voices*. They are explained below:

Generalisation is usually identified by the use of the present tense and in reference to routine actions (Biber, Conrad, & Leech, 2002). It is also recognised in utterances marked by adverbs of frequency, such as *always*, *usually*, and *often*, or in the use of modals, such as *must*, *should*, among other (ibid.). The term *utterance* is here considered from Goffman's (Goffman, 1981, p. 22) perspective, as a "spoken unit of talk" in contrast to *sentence*, which is used in relation to the written form. In the case of the teachers' episodes analysed here, they can also be revealed in statements about general facts about teachers, students, or their practice as a whole, as articulated in the narratives (see also Section 5.3.3).

Shared knowledge relates to the inclusion of the listener (here referred to as *researcher-as-listener*) in their narratives, especially in the spoken mode. It is evidenced in the use of discourse markers such as 'you know' or its Portuguese version *né* (e.g., *interaction is in the classroom, in a… **you know**... 2nd language classroom*). The term *you know* (or *y'know*) functions as an "information state transition" and can refer to "participants' knowledge (…) redistributed through talk" (Schiffrin, 1987, p. 267). This type of marker is common in verbal interaction and marks the difference between the two modes (spoken and written) in teachers' narratives. Sentence tags such as *Isn't it? Doesn't it?* which are "used to check or clarify information, or involve the listener in a more interactive way" (Carter & McCarthy, 2006, p. 299) and expressions such as *Do you understand? Understand?* or *Right?* also

function as tag questions to ask for endorsement or “to check understanding” (ibid., p. 136).

Uncertainty relates to how teachers express their hesitations and doubts about their practice in general. It was evidenced in the use of ‘I don’t know’, e.g., *I think it's the opportunity... although it's not really...I don't know*. The term *I don’t know* could be understood as a discourse marker, but when inserted into an utterance made sense as an expression of uncertainty. In brief, discourse marker refers to “words and phrases which function to link segments of the discourse to one another” they also “indicate various kinds of relationship between utterances”(Carter & McCarthy, 2006, p. 208). Occasionally, uncertainty can be articulated through the use of conditional forms which need to be interpreted in the context offered by teachers (e.g., Biber et al., 2002; Tannen et al., 2015), for example.

Evaluation relates to “the attitude of the narrator towards the narrative”(Labov & Waletzky, 1967, p. 37) or to the attitude towards the actions described. In other words, the teachers evaluated their own stories as if they needed to validate the reality of the events recounted by giving emphasis or specific qualities to what they said. It could be observed in the use of comparatives, negatives, modals, among other expressions, such as *really*, in, *It's really controlled*.

Articulation of teachers and students’ voices relates to the ways the teachers represented themselves and their students as characters in the story. The notion of voice is here taken as dialogic, that is, it involved “interpersonal relations,” role playing and social context (Tardy, 2012, p. 40).

It also links to Bakhtinian notion of voice and “speech diversity” (Bakhtin, 1981, loc. 5686) and to Holquist introduction to Bakhtin’s *The Dialogic Imagination* (1981, loc. 116):

> My voice gives the illusion of unity to what I say; I am, in fact, constantly expressing a plenitude of meanings, some intended, others of which I am unaware.

In this view, a *plenitude of meanings* emerged from teachers’ narratives, especially when they articulated their discursive strategies.

Teachers and students’ voices can also be interpreted in the use of the pronoun *we* as an *exclusive we*, that is, it is used by teachers in their narratives to represent themselves and their own groups (of teachers or of teacher and students). In the current study, the social relationships indicated by the use of *we* have the meaning of *exclusive we* as suggested by Handford (2010). In other words, the pronoun ‘we’ refers to the participant who speaks and his/her own group (his/her students or colleagues), but not to the listener (or the researcher) – e.g., ***we*** *practice a lot then* ***we*** *sing,* ***we*** *practice*. The meaning of exclusive *we* here functions in opposition to the inclusive *we*, which represents the teacher who talks and the people present at the time she speaks (Handford, 2010) – or the researcher-as-listener. Of course the pronoun ‘I’ also appears as the teacher who talks or as students who talk (Section 5.3.3 offers examples of both).

All of the themes identified in each of the three groups above are explored in the analytical chapters (Chapters 5 and 6). Also, in the discussion chapter (Chapter 7), I refer back to the understandings of the emerging themes as they are expressed in the teachers’ narratives.

4.5 Chapter summary

This chapter presented the *research design* of the current study. It focused on the processes and methods which helped the development of the research. Section 4.2 explained how the sample, the setting and the ethical procedures influenced the organisation of the research process. Section 4.3 explained the methods used to generate data (e.g., interview, narrative tasks, and the focus groups) and the iterative process which built up the interpretation of the data. Section 4.4 centred on the analytical process which occurred during and after the fieldwork. It also explored the episodes of narrative and the handling of the data. Next chapters (5 and 6) present the data analysis of the PEC and the public school and present further discussion of the ideas which underlie the analytical stages.

5 Analysis and interpretation: the data produced by the private English course teachers

5.1 Introduction

The analysis and results presented in Chapters 5 and 6 offer a detailed representation of teacher cognition as articulated in the teachers' narratives in the private (PEC) and public school contexts, respectively. As noted in Section 4.4, from the four individual constructs of teacher cognition, the interpretation of the data developed to include the emerging themes, as mentioned in Chapter 4. Thus, drawing on Borg (1998, 2003, 2010), Woods (2009), Barcelos and Vieira-Abrahão (2010), Walsh (2011), Schifrin (2010), Tannen (1982, 2007), Clandinin and Connelly (1987, 2000), Clandinin (2013), Labov (1972, 2013), Labov and Waletzky (1967), Riessman (2008), and the related literature, I suggest that to successfully understand the constructs of teacher cognition, they cannot be analysed on their own individually because in teachers' narratives the constructs are combined with other dimensions and meanings.

In this chapter, the data produced in the PEC is analysed by participant, taking into consideration the four constructs of teacher cognition (knowledge, thought, beliefs and decision-making) and their relationships to both the notion of classroom interaction provided by the teachers and the themes which emerged during the analytical process. Thus, the following sections present the analysis of the participants' episodes of narrative, that is, the

smaller units of narrative which responds to a question or prompt (see Section 4.4.2 for details on episodes).

5.2 Descriptive overview of the analytical procedures

5.2.1 Analysis by participant

The current chapter presents the results of the analysis for the PEC teachers. As seen in Section 4.4, the initial analysis focused on the four constructs of teacher cognition; it started during the fieldwork and developed through the further stages of the analysis. This initial analysis established the relationship between teacher cognition and teachers' understandings of classroom interaction. Thus, the systematic analysis of the data generated an array of interpretations and results.

The analysis presented in this section refers to the contribution of each participant to the current study. The choice of the organisation by participant is for two main reasons. First, because the main focus of this study is the teacher and his/her articulation of teacher cognition of classroom interaction in narratives; second, because the participants' voices generated different discursive strategies to build their individual views of the themes here explored.

Section 4.2.1 stated that nine teachers took part in the current study, five of them working in the PEC. They provided written and spoken data through interviews and narratives. Table 5.1 presents an overview of the data (number of words) produced by each participant in the private English course (PEC) context.

Table 5.1 The data generated by the PEC participants (in number of words)

Researchable Actions (RA)	RA 0	RA 1	RA 2	RA 3	RA 4	RA 5	RA 6	N. of words
Participants	**1ST contact**	**Interview 1**	**Narrative 1**	**Interview 2**	**Narrative 2**	**Interview 3**	**Focus Group Talk**	**Individual production of data**
1. EDUARDO	✓	2,814	**581**	4,254	*2,179*	4,710	19,200	14,538
2. LIDIA	✓	2,410	**1,102**	1,853	*1,748*	4,729		11,842
3. FLORA	✓	3,424	**316**	3,046	**376**	-		7,162
4. LEONOR	✓	1,012	**961**	1,379	***740***	2,459		6,551
5. MARCO	✓	3,041	**1,130**	1,891	**675**	3,151		9,888
Sub-total PEC (Number of words)							19,200	49,981
Total								69,181

Table 5.1 organises teachers in their order of participation in the research process. Thus, in the PEC, Eduardo was the first to take part in the study and Marco was the last to join. Due to school schedules, I started the study in the PEC at the beginning of the year (2014); and later began the study in the public schools (the analysis chapters follow this same order); and afterwards I had regular visits to both settings throughout the semester (Chapter 6 gives details of the public school data analysis).

Columns RA2 and RA4 of Table 5.1, above, show that when the narratives were written (in bold) they produced a lower number of words than the spoken narratives (in Italics). Two probable main reasons for that to happen were: speaking opportunity and the time available to spend on the task. The former implies that speaking gave the teachers the opportunity to expand their stories and discuss other topics related to the task, whereas in the written narratives, they limited themselves to responding to the question or prompt. The latter reason suggests that the participants might have preferred to talk because writing demanded time to expand their thoughts and the use of formal language structures.

Table 5.1 above also shows that the number of words generated in the focus group discussions refers to the whole group. The analysis draws on the data produced in the focus group discussions when relevant (Section 4.3.3 describes the focus groups). One participant, Flora, did not fulfil all the researchable actions (as seen in Section 4.3), but her contribution was also analysed in this study.

5.2.2 The analytical stages

Chapter 4 described how after the initial analysis during the fieldwork, further stages of analysis developed, which were cyclical and interrelated. The analysis offered in this chapter represents the outcome of both cycles of analysis which were organised in a detailed way. Thus, as happened in the analytical process, in this chapter, the analysis is presented in two stages. The first focuses on the articulation of the four constructs of teacher cognition (knowledge, thought, beliefs and decision-making) and their interrelation to classroom interaction (with reference to the initial analysis). This stage examines the ways teachers defined, exemplified and positioned themselves in relation to interaction. The next stage focuses on the emerging themes which relate to the teachers' discursive strategies, as explained in Section 4.4.5.

In the analytical chapters, the teachers' narratives are divided into *episodes of narrative* (discussed in Section 4.4.2). The chapters are organised by teacher and subsequently by construct of teacher cognition, hence, the episodes selected in the analysis of the constructs do not only illustrate an individual construct, but were chosen because they illustrated a construct

best. In other words, the episodes show characteristics more related to one construct than to another. Therefore, as shown in the individual discussion sections (by participant), the same episode can also be analysed from an inclusive perspective to show all the constructs and themes which emerge from them (e.g., Table 5.11).

Thus, the current chapter offers a systematic and comprehensive analysis of the data generated by the PEC participants, according to the stages mentioned above: the analysis of the four constructs and their relationships with interaction, and the discursive strategies. In order to clarify the analytical procedures, a detailed explanation is predominantly given in the analysis of Eduardo's episodes (throughout Section 5.3). The analysis of the other participants (from both PEC and public schools) follows a similar pattern, but more straightforwardly. However, references to Eduardo's sections or previous chapters are made where necessary.

5.3 Participant 1: Eduardo

5.3.1 Eduardo: background information and the data produced

Eduardo gave a passionate and prolific contribution to this study. At the time of the fieldwork, Eduardo had seven years of experience as an EFL teacher and had been working for about three years in the PEC. He explained he was interested in participating in the research process for the purpose of teacher development in Amazonas.

He has a Masters' degree in a field related to language teaching, and in his narratives, he also demonstrated his concern for students' emotional and academic development. Eduardo appears to be sensitive to what happens in the classroom, constantly trying to adapt his teaching to create a safe environment for learners.

Eduardo's experience in the EFL classroom ranges from beginner (1st year students, with no or little English proficiency) to advanced levels (students with very good English proficiency, able to understand complex structures and use EFL skills, such as listening, speaking, reading and writing). In the PEC, he referred to his young learners (6 to 9 year old students) and his experience with them in most of his narratives.

Eduardo made a valuable contribution to the current study both in number of words and in his rich and comprehensive classroom stories. As noted in Table 5.2, he chose to deliver his narratives mostly in spoken mode (see interviews and narratives in the Table 5.2 below) because, in his own words, he believed it would be easier to explain the details of his experience and have his reflective moments in a spontaneous way. Eduardo also decided to use Portuguese (L1) to talk about his experience. Nevertheless, there is frequent codeswitching in his stories, that is, the choice of using either mother tongue or foreign language in his articulation. As seen in Gardner-Chloros (1991, 2009) and Samar and Moradhkani (2014) codeswitching also implies the speaker has related competence in both languages.

Table 5.2 Information about the data generated by Eduardo

Participant 1: EDUARDO					
Researchable Actions (RA)		N. of words	Mode	Lang.	Main focus / notes
0	1ST contact	✓	S	L2	1st meeting with teacher at the PEC, talking about procedures and paperwork.
1	Interview 1	2,814	S	L2	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	Narrative 1	581	W	L2	Focus on teacher's experience and specific interactive activity in the classroom.
3	Interview 2	4,254	S	L1	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	Narrative 2	2,179	S	L1	Focus on teacher's experience, responding to *teacher Maria prompt*, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
5	Interview 3	4,710	S	L1	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students.
Total		14,538			
6	Focus group discussions	19,200*	S	L2	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever he feels appropriate.					
* Total number of words produced in the PEC after two sets of group discussions.					
Key: Int.= interview Narr.= narrative S= spoken mode W= written mode; Lang.= language used by participant L1= Portuguese L2= English					

From his narratives, Eduardo's teaching experience is evident, especially with young learners. The analysis also reveals his awareness of several factors which help build his classroom environment. The next sections focus on the analysis of the episodes produced by Eduardo in detail.

5.3.2 Eduardo's articulation of knowledge

As seen in Section 2.2.2, *knowledge* is here understood as personal practical knowledge. In other words, it relates to the personal, academic, pedagogical, and professional knowledge which can be observed in teachers' narratives (for details of knowledge, see Ben-Peretz, 2011; Clandinin & Connelly, 1987; Connelly et al., 1997; Elbaz, 1991; Hoy et al., 2006; Woods & Çakır, 2011).

The language and metalanguage, or technical terms (Walsh, 2012; Walsh & O'keeffe, 2010) used by Eduardo in the episode below, for example, is considered evidence of his knowledge of classroom interaction in EFL teaching. Asked about his understandings of classroom interaction, Eduardo says:

> I think that when a student comes to an English classroom to learn another language, that is, English, the student must keep in mind that they have specific purpose here, they are... they have a language as a target and they have to go through the process and by the end they have to be able to speak the language. To use the language properly and to be able to communicate. And having... keeping this in mind I think I try to offer them opportunities, meaningful opportunities to use the language. So there is an exposure we see some things, we see some situations and then we notice some things about the language, and then I think 'that's my role to offer them strategies, activities in which they will be able to use what they noticed about the language'. So if they don't have this interaction it's not going to be real, it's not going to be authentic. So, for me interaction is in the classroom, in a… you know... second language classroom. I think it's the opportunity... although it's not really... I don't know... It's not like a situation we face when we are on the street. It's really controlled... we try to control. We think about things previously so it's not really, totally natural because there is a certain control of things but I think we... they must be given the opportunity of using the language they are studying in real and meaningful ways. So when I think about interaction I think about, for example, for the kids when we studied the sentence, the chunk, 'What's your name?', 'Hi, what's your name?', 'My name is...' and we practice a lot then we sing, we practice... they practice the pronunciation they really get used to the structure and then after that they go and talk to their friends. They talk to the friend by the right, by the left and then they talk to everyone. I try to make this, I always try to make this, make them talk to as many classmates as possible and for me that's important: interaction. It has to do with activities they will be able to speak what they have learned. (Eduardo, Int. 1)

In the episode above, Eduardo interprets classroom interaction, offers a thorough explanation of teacher and students' goals in the EFL classroom, positions himself in relation to interaction and the language used in his class, and provides examples of interaction. The underlined utterances represent the idea of knowledge and stand as evidence that Eduardo is aware of academic language, professional metalanguage, and language teaching methodologies. To illustrate, Table 5.3 below presents the analysis of some utterances extracted from the episode above.

Table 5.3 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
…they have a language as a **target**. So if they don't have this **interaction** it's not going to be real, it's not going to be **authentic**.	use of metalanguage and academic language	positioning himself in a conditional relation to interaction
…offer them opportunities, **meaningful opportunities** to use the language… they must be given the **opportunity of using the language** they are studying in real and **meaningful** ways… …it's the **opportunity**...	language teaching methodologies which focus on meaningfulness and empowerment of students.	giving definitions of interaction.
…**exposure** … **notice**…**practice**… …'that's **my role** to offer them **strategies**, activities in which they will be able to use what they **noticed** about the language'. … and we **practice** a lot. … they **practice** the **pronunciation**… get used to the **structure**… … talk to their friends… by the right, by the left… to **everyone**… try to make this, make them **talk** to as many classmates as possible	language teaching routine methodologies which focus on empowerment of students (exposure, notice, practice of structure and pronunciation), language acquisition (several ways of practicing), different types of learners (variety in offering language practice)	exemplifying the structure of interaction (scaffolding students to reach practice)
they have to **go through the process**… they have to **be able to speak the language**… use the language **properly** and to be able to **communicate**…	language teaching methodologies which focus on meaningful communication	positioning towards students' roles and language use in interaction
It has to do with activities they will be able to speak what they have learned	classroom experience	defining interaction

The analysis in Table 5.3 shows that the interpretations were made on the basis of the relationship between the constructs of teacher cognition and the concepts of classroom interaction. For example, the utterance *if they don't have this interaction it's not going to be real, it's not going to be authentic*, suggests that there is a conditional element to achieving the classroom goals in this interaction. The analysis also suggests the idea of authenticity as giving students a simulation that makes classroom practice close to the authentic use of language and interaction becomes the appropriate way to do it. This view links to the notion of authenticity in Crawford (2002) in relation to authentic material, and in Nunan and Bailey (2009) and Brown and Lee (2015) concerning test tasks. Thus, the analysis of knowledge in this episode also suggests that Eduardo uses some strategies to articulate his understandings of interaction from his experience.

5.3.3 Emerging themes: the discursive strategies

While articulating his knowledge of classroom interaction, Eduardo uses particular ways to tell his stories, which also became apparent in other participants' narratives. These are considered as emerging themes of discursive strategies. For example, generalisation is used in Eduardo's episode and this may be due to the general questions asked to participants about their practice (see examples in Table 5.4 below). However, in addition to the generalisation of the idea of interaction, other discursive strategies also occurred and in the development of the analysis, they become meaningful themes. This occurs in the articulation of teacher's and students' voices, the expressions which suggest uncertainty or shared knowledge, and the evaluation of both the story told and the actions described. Observing the examples extracted from Eduardo's episode above (in Section 5.3.2), it is possible to understand the discursive strategies he used (see Table 5.4 below). The strategies are considered in the analysis not only as planned tactics, but also as the spontaneous articulation of his thoughts and ideas during the storytelling (refer to Section 4.4.5 for details).

Table 5.4 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Generalisation	I think that **when a student comes** to an English classroom to learn another language, that is, English, the **student must keep in mind** that **they have** specific purpose here
Articulation of teacher's voice (reference to 1st person and use of we – inclusive or exclusive)	Then I think, **'that's my role** to offer them strategies, activities in which they will be able to use what they noticed about the language'. **we** practice a lot then **we** sing, **we** practice...
Shared knowledge	So, for me interaction is in the classroom, in a… **you know**... second language classroom
Uncertainty	I think it's the opportunity... although it's not really... **I don't know...**
Articulation of students' voices	for the **kids** when we studied the sentence, the chunk, **'What's your name?', 'Hi, what's your name?', 'My name is...'**
Evaluation	It's **really** controlled...

Table 5.4 (above) offers examples of the emerging themes considered in the analytical process. For example, the idea of *generalisation* refers to the moments Eduardo articulated his experience in a general fashion. As seen in Section 4.4.5, **generalisation** refers to the ways the teacher makes general comments in his narrative, e.g., *the student must keep in mind that they have specific purpose here*.

This analysis also shows the **articulation of** both the **teachers and students' voices**. Overall, the former, refers to the strategies used by teachers to talk about themselves and the latter to talk as their students. The use of 1st person (singular or plural) is the main form of voicing, which resonates with the concept of direct speech, when the narrator relays the character's words in the way they were originally spoken (Carter & McCarthy, 2006). In the case of teachers' narratives, this discursive resource is used as a "speech representation" of what both teacher and students said or at least could have said according to the storyteller, that is, the participant teacher (ibid., p. 804).

Specifically, the **articulation of students' voices** relates to the approach participants use to bring students' action to the present situation, as it is happening as the story is told – in direct speech. It can be observed in the personal pronouns (*I* and *we*) or possessive adjectives (*my*, *your* and *our*). It also occurs in utterances which imply the use of 1st person or according to the context to represent students' voices in class. For example, in Eduardo's example of students practicing greetings ('*Hi, what's <u>your</u> name?*' *'<u>My</u> name is...*'), *your* and *my* represent students' voice in direct speech.

The analysis also presents other themes, for example, the idea of **uncertainty** refers to teachers' doubts or hesitations when they tell their story. It can be interpreted in the use of 'I don't know' or in conditional clauses. **Shared knowledge** relates to the inclusion of the *researcher-as-listener* in the story. It can be construed from the term 'you know' and in tags such as *Doesn't it?* or *Right?*, among others. Finally, the last emerging theme in Eduardo's episode in Table 5.4 is the idea of **evaluation**, which relates to the ways teachers weigh up their stories or make them interesting to the listener. For instance, Eduardo says *It's really controlled*. *Really* in this utterance represents his evaluation of the topic explored (see Section 4.4.5 for the description of all the themes).

These six strategies are also considered in the analysis of all the participants' production. These emerging themes generated a new dimension of analysis of the four constructs of teacher cognition because they were part of the teachers' articulation. Later, in the conclusions of this chapter (Section 5.8), I offer a discussion of these emerging themes and their roles in the building of the analytical process.

Thus, Eduardo's episode analysed in Sections 5.3.2 and 5.3.3 suggests that knowledge is not always clearly apparent as a separate construct of teacher cognition and there are several factors which can influence the interpretation of knowledge as such. Also, the interrelation between knowledge and the concept of classroom interaction is evidenced in the same utterance with different coding (definition, generalisation, articulation, etc.) as well as knowledge at the same time, revealing the complexity of the analytical

process. Finally, the emerging themes generated new dimensions for the interpretation of the narratives because knowledge has concrete features when articulated in Eduardo's narrative. The next sections offer the analysis according to the other constructs of teacher cognition.

5.3.4 Eduardo's articulation of thought

As seen in Section 2.2.3, the construct *thought* has an abstract nature and consequently there are difficulties observing a person thinking or a person's thought. However, the use of narratives, for instance, allows us to understand the idea of thought (or thinking). This interpretation was possible by considering the articulation of thought itself and other related ideas such as planning, believing, feeling, deciding, or theorizing as presented in teachers' stories.

In the initial analysis, the close relation between the constructs of thought and beliefs became apparent, often generating multiple coding of the same episode. In other words, the same utterance could be understood both as a thought and a belief. Thus, in this study *thought* is analysed by mainly considering three factors. First, beliefs and knowledge of theories and concepts can influence teachers' thoughts and, consequently, their articulation. Second, thought can be represented by the verb *think* (followed or not by *of*, *about*, and *that*), but is not restricted to it – sometimes a thought can be considered as such even when the verb *think* is not used. Third, the context can influence the interpretation of an episode as a thought – or the same episode as beliefs or knowledge.

Eduardo's episode below represents an example of his articulation of thought for the purpose of the current study. He was asked about the ways interaction happened to different age groups and how students made use of the target language. The analysis reveals a close interrelation between the constructs knowledge, thought and beliefs. For example, Eduardo shows he is knowledgeable about three types of students and their reactions to a lesson (*adults*, *teenagers*, *kids* – in bold); he articulated his thoughts about these topics, which can also be interpreted as his beliefs; and he often uses terms such as *I think* and *I feel* (underlined in the text), which can be understood as both thoughts and beliefs depending on the context. In addition, I considered the whole excerpt (below) as an *extended thinking episode* provided by the teacher.

> I think it depends....I feel that. It changes drastically if I compare **adults** and **teenagers**. Because the **adults** I feel that they have a clear objective, that is, they want to learn, that it is important and they need to experience that situation. They need to be exposed to the language to learn it. Then, it is much more difficult for me to find an adult who is going to…if I give them a task in English, who is going to simply ignore it and start speaking Portuguese and not accomplish their task? For the **teenager**, I think it is much more complicated because sometimes even if he accomplishes his mission, he does not do it in English. He wants to talk about the topic, you know, but he does not want to make any effort to do it in English. So, it is more or less like…I would say laziness, a certain level of laziness of noticing that this is the moment of using English…that perhaps he is not going to have another moment viable to exercise the topic. The **adult**, I think, has this more in focus. The **kid** is more easily convinced to participate in the task, to get engaged in that moment. But I have difficulties in convincing the **teenager**, because he does not feel that…I feel it…that… that is not very important or that he can even do it, but he does not want to make much effort. He does not want to have the trouble to say something in another language. And I feel this difference, this way, very obvious. *So obvious that* I think the age I have more difficulties with is, certainly, the group of **teenagers**. (Eduardo, Int. 2)

Original version: Eu acho que depende... aí a coisa muda muito. Eu sinto isso. Muda muito, drasticamente, se eu for comparar adultos e adolescentes. Porque pros adultos eu sinto que eles têm um objetivo mais claro, de que eles querem aprender, de que aquilo é importante e eles têm que passar por aquela situação. Têm que estar expostos à língua para aprendê-la. Então é muito mais difícil, pra mim, encontrar um adulto que vai... se eu der uma tarefa pra eles cumprirem em inglês... quem vai simplesmente ignorar aquilo e começar a falar em português e não vai fazer a missão. Pro adolescente eu acho muito mais complicado porque, às vezes, mesmo ele cumprindo a missão, ele não cumpre em inglês? Ele até quer falar sobre o assunto, né, mas ele não quer se esforçar a ponto de fazer aquilo em inglês. Então, é mais ou menos... eu diria que é uma preguicinha, um certo nível de preguiça mesmo de perceber que aquela é a hora dele usar o inglês. De que, talvez, ele não vai ter outro momento, um momento tão viável para treinar aquilo. E o adulto acho que tem isso mais focado. A criança, ela é mais facilmente convencida a participar daquilo, a se envolver naquele momento, mas eu tenho dificuldade em convencer o adolescente, porque ele não só sente que... eu sinto isso, que aquilo não é muito importante ou que, ele até pode fazer, mas não quer se esforçar tanto assim, não quer ter o trabalho de falar aquilo em outra língua. E eu sinto essa diferença, assim, bem gritante. Tanto que eu acho que é a idade que eu tenho mais dificuldade, com certeza, de lidar são... é o grupo de adolescentes. (Eduardo, Int. 2)

In the episode above, the analysis suggests that Eduardo's thoughts about the three types of learners (kids, teenagers and adults) are founded in his teacher experience and in his beliefs about what each group represents in terms of their attitude to learning. However, most of the occurrences of 'I think' and 'I feel' were in fact an interrelation of constructs. For example, in the focus group discussion (FG), Eduardo used *I think* to express his own idea about interaction:

> I think there is a very important aspect about the term interaction… it's really free, it's not automatic, it can go through different possibilities and it's natural, it's a really social thing… It's spontaneous, yes… And differently from speaking, [interaction] can be… could be more automatic, more programmed. (Eduardo, FG 1)

The term *I think* can be taken as him starting to articulate his knowledge, a thought, or a belief about interaction (e.g., that it can be *really free*, *natural*, or *more programmed* than speaking). Table 5.5 below shows how the notion of thought related to classroom interaction as shown in the first episode of thought (Eduardo, Int. 2 above).

Table 5.5 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
It changes drastically if I compare adults and teenagers. Because the adults I feel that they have a clear **objective**	different objectives between adults and teenagers	positioning himself in a conditional and comparative relation to interaction as it occurs in each group
They **need to be exposed** to the language to learn it.	students' needs	stating the purpose of interaction.
For the **teenager**, I think it is much more **complicated** because sometimes **even if he accomplishes his mission, he does not do it in English**.	difficulties encountered by teenagers to use another language	positioning towards use of L2
The **adult**, I think, has this more in **focus**. The **kid** is more **easily convinced** to participate in the task, **to get engaged** in that moment. But I have difficulties in convincing the **teenager**, because he does not feel that…I feel it…that… that is not very important or that he can even do it, but he **does not want to make much effort**.	differences in focus between adults, kids, and teenagers	judging students' attitude
And I feel this difference, this way, very obvious. *So obvious that* I think the age **I have more difficulties** with is, certainly, the group of **teenagers**.	conclusions on difficulties to teach teenagers	stating difficulties to control interaction in teenager groups

The interpretation of thought in Table 5.5 show that the term 'I think' does not clearly imply that what the participant articulates is in fact a thought. It can be observed that the thinking process demonstrated in the excerpt is embedded in professional knowledge, beliefs about this knowledge, feelings about students' attitudes, and the implied decisions made according to the age of the learner.

The discursive strategies (mentioned in Section 4.4.5 and 5.3.3) are also evident in the analysis of thought. The thought episode above (Eduardo, Int. 2) shows that most of the strategies are represented in the analysis (Table 5.6).

Table 5.6 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	It **changes** drastically if I compare adults and teenagers. Because the adults I feel that they **have** a clear objective… They **need** to be exposed to the language to learn it.
Shared knowledge	He wants to talk about the topic, **you know**, but he does not want to make any effort to do it in English.
Uncertainty	**…if** I give them a task in English, **who is going to simply ignore it** and start speaking Portuguese and not accomplish their task?
Evaluation	It changes **drastically**… …it is **much more difficult** for me… …the age I have **more difficulties** with is, certainly, the group of **teenagers**.
Articulation of teacher students' voices	No apparent occurrences in this episode.

As noted in Table 5.6, Eduardo generalises about interaction throughout the episode, which might be influenced by the general question about interaction for different age groups. He makes use of the discourse marker 'you know' as looking for the understanding and agreement of the researcher-as-listener. Uncertainty is identified in the use of 'if' clauses (*if I compare*, *if I give them*). The conditional nature of the utterances implies that there is no certain attitude or action in the classroom even if the teacher plans his lesson. These terms can also be seen as him exemplifying a situation.

The use of adjectives (and adjective phrases) and adverbs (and adverbial phrases) seems to emphasize Eduardo's story and actions. Evaluation gives a dramatic tone to the story – to his actions and to students' actions and attitudes (*drastically*, *much more difficult*, *much more complicated*, *more easily convinced*, *very obvious*, *so obvious*, etc.).

There was no clear evidence of the articulation of teacher and students' voices in this specific episode, but Eduardo often uses this strategy in his stories. For example, in another episode from Interview 2, Eduardo says,

> So, first I convince them that to talk about *that* is nice using L1 **'então, o que a gente tá vendo aqui?**' [So, what are we seeing here?]. Then, they start to

talk […] And then they ask: 'How is this really, **teacher**? How to pronounce this? What's the meaning of this?' (Eduardo, Int. 2)

Original version of complete episode: "Então eu primeiro convenço eles de que falar sobre aquilo é legal, talvez usando a língua 1... 'então, que que a gente tá vendo aqui?' Aí eles começam a falar. [...] Aí eles questionam: 'como é que é isso aqui mesmo, *teacher*? Como é a pronúncia? O que isso significa?'" (Eduardo, Int. 2)

Here, the articulation of the teacher's own voice is an example of what Eduardo might have said to students. He uses the 1st person and the present tense as if the action is happening whilst he tells the story.

Students' voice is also represented in the 1st person when he recounts the students asking for clarification '*How is this really, **teacher**? How to pronounce this? What's the meaning of this?'* This is also an example of codeswitching, used as a strategy. The term 'teacher' (in bold) is the only word represented in English in this example. There are similar occurrences of the vocative use of *teacher* in other participants' episodes. As defined by Carter and McCarthy (2006, p. 928) a vocative refers to "a noun phrase used to directly address the listener or reader, normally in the form of a personal name, title or term of endearment." Later in the conclusion to this chapter there is a discussion of this topic.

The discursive strategies used by Eduardo for the articulation of his thoughts add interesting features to the data analysed. First, it became evident that thought cannot be clearly interpreted uniquely as thought. Second, constructs such as beliefs and knowledge can sometimes be considered as occurring in the same episodes which represent thought. Third, although the articulation of thought represents the construct at a concrete level, it remains as an

abstract idea which can generate multiple representations and interpretations in different contexts.

5.3.5 Eduardo's articulation of beliefs

As said previously, *beliefs* represent an array of mental processes such as attitudes, judgments, opinions, perceptions, thoughts, among others. Beliefs can be interpreted under two conditions: when teachers use the verb *believe* or when they use *I think* to suggest beliefs. Consequently, beliefs and thought can have multiple interpretations depending on the context (see Section 5.3.5). In Eduardo's next episode, it is possible to note the two instances cited above. Eduardo was asked about an interactive lesson that does not develop as planned (analysing teacher Maria's case – examples in Appendix 8).

> I think this was part of my routine at the beginning of my career. I think that in several moments in which I did not know what to do, I had moments like that, yes. However, today I think that it is difficult, difficult to say that what we plan might not have the exact results. I think that today it is much easier to make the lesson happen as planned. Sometimes, I change even by the 'feeling' during the class. Add something, or make that thing I had planned by noticing their behaviour, or if they enjoyed or not the activity. But this is from 'feeling', you know, and we gradually gain that (feeling) with time. But it is necessary to have the eyes open to what is working the best way possible, and the best way possible is the best way possible for them. Right? So that they learn, so that learning is as efficient as possible, not necessarily for me. Then sometimes we plan, but we make changes, but it happens very naturally, in the classroom. (Eduardo, Narr. 2)

Original version: Eu acho que isso fazia parte mais da minha rotina no início da minha carreira. Eu acho que em muitos momentos em que, sem saber o que fazer, tive momentos assim, sim. Mas hoje em dia eu acho que é difícil, difícil dizer que o que a gente planeja pode até não ter os resultados exatamente como a gente esperava, mas eu acho muito fácil hoje fazer com que a aula aconteça de forma como eu planejei. Às vezes eu mudo até pelo '*feeling'* durante a aula, de colocar alguma coisa ou de fazer aquilo que eu havia planejado por perceber o comportamento deles ou quanto eles gostaram ou não da atividade que tá acontecendo, mas isso também é muito de '*feeling'*, né, e isso também a gente vai ganhando com o tempo. Mas é ter o olhar atento para ver o que está funcionando da melhor forma possível, e a melhor forma possível é a melhor forma possível para eles, né, para que eles aprendam, para que o aprendizado seja o mais eficaz possível, não necessariamente pra mim. Então às vezes a gente planeja mas a gente altera, mas acaba acontecendo muito naturalmente, dentro da aula.(Eduardo, Narr. 2)

As happened with thought, the analysis of beliefs resulted from its interrelation with the constructs of thought and knowledge. In the episode above, for instance, Eduardo uses a sequence of 'I think', which in the initial analysis was coded as beliefs, but could just as well be considered as thought. However, looking at the episode as a whole, Eduardo appears to use his teacher's experience (his routines and time teaching) as the basis for his beliefs about interaction. Table 6.7 below shows the details of this analysis.

Table 5.7 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
I think that **this** was **part of my routine at the beginning of my career**.	it is common for teachers to have problems regarding planning in the beginning of their career.	positioning towards the planning of interaction and to time (refer to past)
I think that **it is difficult**, difficult to say that what we plan might not have the exact results.	it is difficult to evaluate outcomes of planning.	stating the purpose of planning interactive lessons
I think that today it is much **easier to make the lesson happen as planned**.	his teaching experience makes him more confident about his planning.	positioning towards the planning of interaction and time (refer to present)
I **change** even by the 'feeling' during the class. **Add** something, or **make** that thing I had planned by **noticing** their behaviour, or if they enjoyed or not the activity. But this is from 'feeling', you know.	in class decisions are necessary to make a lesson planning work.	positioning towards decisions made during interaction
But it is necessary **to have the eyes open to what is working** the best way possible, and the best way possible is the best way possible for them. Right? **So that they learn**, so that learning is as efficient as possible, not necessarily for me.	even an experienced teacher needs to pay attention to students' needs and learning developments at all times.	judging and positioning towards students' needs

The analysis in Table 6.7 suggests that Eduardo's beliefs in relation to problems with the lesson planning relate to experience and time. His attitude to interaction is student driven. His narrative suggests that if interaction is not working well, it can be due to a teacher's inexperience, that is, it might happen more frequently with novice teachers than with experts. Such

knowledge contributes to Eduardo paying close attention to his students' attitudes and learning development.

As for the emerging themes in the analysis of beliefs, Eduardo makes use of several discursive strategies to articulate his ideas (see Table 5.8 below).

Table 5.8 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	I think that it is difficult, difficult to say that what we plan might not have the exact results. I think that today it is much easier to make the lesson happen as planned.
Shared knowledge	But this is from 'feeling', you know, The best way possible is the best way possible for them. Right?
Uncertainty	if they enjoyed or not the activity
Evaluation	it is much easier to make the lesson to what is working the best way possible it happens very naturally, in the classroom
Articulation of teacher students' voices	No apparent occurrences in this episode.

Generalisation occurs when Eduardo articulates his opinion about planning problems and refers to past and present time. There are two main indications of shared knowledge made by the term *né* (in Portuguese) which translates as *You know* and *Right?,* according to the context. Both expressions in English imply the inclusion of the researcher-as-listener in the conversation. As seen in other examples, evaluation is evident when Eduardo highlights the actions and the story itself by using expressions such as *much easier*, *the best way possible*, and *very naturally*. The use of superlatives and comparatives are very common in Eduardo's articulation. In this episode there is no evidence of articulation of teacher or students' voices.

The analysis suggests that the idea of beliefs is articulated mainly from a source of knowledge and teacher's experience plays an important role in the building of his beliefs. Also, the interrelation between knowledge, thought and beliefs is evident in most of the utterances coded as beliefs.

5.3.6 Eduardo's articulation of decision-making

The construct *decision-making* refers to representations of planning, resolutions and actions which teachers make in their narratives. It can indicate pre-, while, and post-classroom planning, interaction or action. It can also be interpreted from the verb *decide* or in articulation of classroom management (e.g., when teachers mention grouping, pairing, standing, drawing, talking, writing, etc.), but sometimes it is just implied. Different from the other constructs, decision-making has a concrete nature which can be identified from action verbs.

As mentioned throughout Section 2.2, researchers have often seen teacher cognition as what is in the mind of the teacher, and decisions generated as mental processes. However, the idea of decision-making involves the actions which can be identified as the consequences of such decisions. In the episode below, for instance, Eduardo was asked about his position in relation to students who are not well placed, or at the same level as the others, in his classroom. He said,

> (...) With the kids, for example, I had a student (he says little girl = *aluninha* – probably a 5 to 8 year old student) who was not well placed. She was very different. Her level of literacy was not equivalent to the other students. In the first day of class, I called her mother to talk and asked how her learning process was and the mother said, 'No, really, *teacher*, she is just beginning now'. Then I understood. It was not that she didn't…she was just in a different phase. 'Is she going to continue with the group?' 'If she's going to continue with the group, there is nothing I can do.' I have to work with much love, much dedication, because she will demand things that the others will not. And it was great. It has been great. I can see her development, still with some unevenness, a huge progress. (Eduardo, Int. 3)

Original version: (...) Com as crianças, por exemplo, eu tive uma aluninha que ela tava bem desnivelada. Bem diferente. O nível de alfabetização dela era bem descompensado em relação aos outros. No primeiro dia de aula eu chamei a mãe dela pra conversar e perguntei como tava o processo de alfabetização dela e ela disse: "não, realmente, *teacher*, ela tá começando agora...." Aí eu entendi. Então não é que ela não... é só porque ela tá numa outra fase. 'Vai continuar na turma? Vai continuar na turma, não tem o que fazer.' Tenho que trabalhar com muito amor, muita dedicação porque ela vai exigir coisas que os outros não vão exigir. E foi ótimo. Tá sendo ótimo. Eu consigo ver a evolução dela, dentro ainda de algum desnível, uma evolução enorme. (Eduardo, Int. 3)

The episode above shows that Eduardo's decision was not directly related to classroom interaction, but to the problems and outcomes in his classroom. This episode serves to highlight the importance of the before and after decisions made by the teacher in relation to his students. In this case, Eduardo presumably decided to talk to the mother about her child's level of literacy (it can be inferred that this is a difficult topic to discuss with a parent), but in Eduardo's narrative, it was necessary for him to find out how to deal with that student. His solution (which seems concrete) relates to emotions (abstract ideas) because he said he needed to act with *love* and dedication to help his student make progress. Thus, it can be inferred that some aspects of decision-making can be considered more concrete than others.

Another example of decision-making in Eduardo's stories specifically refers to the classroom. Asked about the autonomy of students in his classroom Eduardo answered,

> In the classroom, I think that it changes a little. It changes depending on students' age and profile. I think that the kids…actually they don't have much autonomy, I'd say they don't have any. (…) I think that their autonomy is related to the performance of the activity, at the moment of really perform and especially in the individual activities. So, they ask 'teacher, may I draw something else? May I refer to another thing? I don't have a brother. I have a cousin. May I draw my cousins? Then, I think that there is, in the individuality, some autonomy. I think that they have less autonomy than the adults, for example.
>
> Adults have more autonomy than the kids. And sometimes it is an autonomy that becomes disobedience. You propose something and they don't want to do it. They want to do something else. Sometimes you make a game in which they need to stand up and they don't want to stand up. They want to remain seated. Then when you ask them to stand up because you want to make a

dynamic lesson, wishing to energize…then they, 'no **teacher**, we don't want to stand up, we are tired.' That's the problem. Autonomy does not always help, I think. (Eduardo, Int. 3)

Original version: Na sala de aula, eu acho que também muda um pouco... muda um pouco dependendo da idade, do perfil do aluno. Eu acho que as crianças... na verdade elas não têm muita autonomia, eu diria que elas não têm nenhuma. (...) Eu acho que a autonomia deles... ela é mais na performance da atividade, no momento de realmente cumprir e, principalmente, as individuais, até. De ele perguntar assim: "teacher, eu posso desenhar uma outra coisa? Eu posso referenciar uma outra coisa? Eu não tenho um brother, eu tenho um cousin. Eu posso desenhar os meus cousins?" E aí eu acho que existe, dentro dessa individualidade, alguma autonomia. Eu acho que essa autonomia deles é muito menor do que dos adultos, por exemplo.

Eu acho que os adultos tem mais autonomia. E às vezes até uma autonomia que se transforma em rebeldia, até. De você propor uma atividade e eles não quererem fazer, querer fazer outra coisa. Às vezes você faz um jogo em que eles têm que levantar, mas eles não querem levantar, eles querem ficar sentados. E aí quando você pede pra eles levantarem... você querendo fazer uma aula dinâmica e tal... querendo se energizar, aí eles: "não, teacher, a gente não quer levantar, a gente tá cansado." Aí eu acho que esse é o problema também. Por quê? A autonomia nem sempre ajuda, eu acho. (Eduardo, Int. 3)

Table 5.9 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	**Teacher decides (notice the bold terms and phrases)**	**Teacher shows the relationships between decision-making and interaction by**
I think that it changes a little. It **changes depending on students' age and profile**(…)the kids…actually they don't have much autonomy, I'd say they don't have any	students' level of autonomy according to the age group. (implied decisions)	positioning towards the planning of interaction and to level of autonomy
So, **they ask** 'teacher, may I draw something else? May I refer to another thing? I don't have a brother. I have a cousin. May I draw my cousins? Then, **I think that there is, in the individuality, some autonomy.**	if students can do what they want. (in class decision influencing planned decision)	exemplifying students attitude to interaction
You propose something and they don't want to do it. They want to do something else. you make a game in which they need to stand up and they don't want to stand up.	if he insists on the plan or changes planned actions due to students' requests. (planned decisions, implied class decisions)	positioning towards decisions made during planning and students' attitude during interaction
then they, 'no teacher, we don't want to stand up, **we are tired.**'		example of interactive activity which students' might not want to participate in

As seen in Table 6.9, Eduardo's decision-making is implied in the discussion of students' autonomy in interaction. As the analysis shows, there are planned decisions (a drawing activity and a game) in which students might not be interested in performing. This type of problem links to Harmer's (2001, p. 126) notion of "problem behaviour." Although Eduardo does not present his final decision (whether the students drew the cousins or did not stand up) his complaint (*autonomy does not always help*) implies that he needs to deal

with such problems and convince students to carry out such activities to reach the goals of his lesson plan. Another aspect of decisions that can be seen in this episode refers to the influences of students' attitude in his planned (prior) decisions, in class (during) management decisions, and probably after class (post) decisions. These stages of decision are discussed in Bailey (2006, p. 269) who also refer to the first two as "pre-active" and "online, or interactive decisions."

In the analysis of decision-making, it was possible to identify all six emerging themes from Eduardo's episodes presented above (see also table 5.10). For example, there was generalisation, usually articulated in present tenses (*it changes*, *have*). The idea of shared knowledge introduced here is implied by the impersonal or generic 'you', which means "people in general" and includes the listener (Carter & McCarthy, 2006, p. 120). In the episode above it subtly includes the researcher-as-listener in Eduardo's story. The expression 'I think' used at the end of the utterance can also be seen as evidence of hedging. As seen in Carter & McCarthy (2006, p. 223), hedging is a linguistic strategy used by speakers "not to sound too blunt and assertive."

Table 5.10 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Generalisation	In the classroom, I think that **it changes** a little. It changes depending on students' age and profile. The adults **have** more autonomy than the kids.
Shared knowledge	**You** propose something and they don't want to do it. Then when **you** ask them to stand up
Uncertainty	Autonomy does not always help, **I think**.
Evaluation	She was **very** different. I have to work with **much love**, **much dedication** at the moment of **really** perform and **especially** in the individual activities
Articulation of teacher's voice	**'Is she going to continue with the group?' 'If she's going to continue with the group, there is nothing I can do.'**
Articulation of students' voices	So, they ask **'teacher, may I draw something else? May I refer to another thing? I don't have a brother. I have a cousin. May I draw my cousins?'** then they, **'no teacher, we don't want to stand up, we are tired.'**

Previously in this section I suggested that Eduardo had a dramatic and emotional style of telling his classroom stories. In the analysis of decision-making this is evident in the way he considers the case of the young student. He describes the student's learning and literacy development as very different and instead of saying he needed to be patient with her in class, Eduardo uses the terms *much love* and *much dedication*. The analysis indicates that there is an emotional factor in Eduardo's relationship with his students which affect his narrative and can possibly affects his teaching, as suggested in Aragão (2008).

This emotional attachment to his students might also justify the way he articulates his students' voices. Interestingly, when Eduardo tells his stories in Portuguese and places his students as active characters, the word *teacher* is always said in English. It seems that the term *teacher* can simply represent the way PEC students in fact refer to the instructors (saying *teacher* in the target language); it can refer to the way Eduardo's mental processes occur in relation to his classroom behaviour; or it can be the point of connection between his story and his classroom (as the story is happening right then in the vivid present). The codeswitching, the shift of position and the voicing (direct or indirect speech) which occur in Eduardo's narrative can also be observed in other teachers' words and are discussed in the conclusion of the current chapter.

Eduardo's articulation shows that the decision-making process starts in the mind of the teacher, perhaps as a thought, but becomes a concrete action in

the words of the participant. Decision-making is also present in the pre-/while/post- classroom development and can be implied or made explicit in the narratives. In addition, Eduardo demonstrated that his decisions are made on the basis of his knowledge and beliefs about interaction, but with great emotional concern for his students' needs and the learning environment. Finally, in Eduardo's narrative (and perhaps in his teaching) these three elements (knowledge, beliefs, and emotions) seem to be important in generating decisions in and outside his classroom.

5.3.7 Discussion of Eduardo's data analysis

As noted in the analysis, Eduardo's articulation of teacher cognition demonstrates that the interpretation of the four constructs usually occurs in combination with each other and cannot be only observed individually. Thus, this section presents examples of an inclusive analysis which considers the analytical stages altogether to show the interrelation of the constructs (Table 5.11).

Table 5.11 Understanding the analytical process

A The four constructs	B Examples	C Relationships to interaction	D Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. But, I try to make them feel as comfortable as possible, because there are already many things they do not have control. Many things. I would say that most of the time they have no control. Then, when they can have it, **these details…on what is more…**I try to be sensitive to let it be more flexible, really, **BECAUSE THEN THEY CAN LOSE THEIR IDENTITY**.	Generalisation Positioning	Uncertainty (pauses) Evaluation (really)
	2. **Sometimes the children are doing an activity and then they start to talk about some other topic that is not related to the class… and this topic leads to another thing. Then, IF I DO NOT DO ANYTHING...sometimes I don't do anything…because I THINK THAT IT IS NATURAL THAT THESE THINGS HAPPEN...but sometimes I feel that it is serious.**	Exemplifying	Uncertainty (if, pauses)
	3. **Because I BELIEVE THAT THE CLASSROOM IS AN ENVIRONMENT WHICH IS REALLY BUILT COLLECTIVELY. It starts with us. It starts first with the planning in the head of the teacher and then it extends to the classroom. It is an environment…and you have to be connected. You with them (students)…they with you…with what is being exposed.**	Defining	Generalisation Shared knowledge Articulating teacher's voice
	4. I try to have a balance. Really do, but my tendency is to create more communicative moments. I could say that I do, I don't know, 65-70% of communications, interaction, spoken interaction really, and…Well, then the other 30-35% more individual, more reflexive…About the process of training writing and reading…**because I am too social, I like to speak a lot and to see people talking**.	Exemplifying	Uncertainty (I don't know) Evaluation (really)
	5. But this thing of you creating the environment, of being alert to everything, is very difficult. You are not well…you perform this with a little bit more of difficulty, it will be more difficult, it will demand a little bit more of energy. **THAT IS WHY THE IDEAL IS THAT WE ARE ALWAYS HAPPY, WE ARE ALWAYS WILLING TO DO IT. PHYSICALLY, SPIRITUALLY, MENTALLY…BUT NOT ALWAYS THIS IS POSSIBLE, BECAUSE WE ARE NOT ONLY TEACHERS**. But that's life, you know. Then, we have, with time, with many hours, with many years, with much practice, we are able to focus even more, even better on separating…to say: **'I will focus on a good lesson, an efficient lesson, even though I am not feeling well.'**	Positioning	Generalisation Shared knowledge (you know) Articulating teacher's voice

* All episodes belong to the same interview (Eduardo, Int. 3)

Original versions (Eduardo, Int. 3)
1. Mas, assim, eu procuro deixa-los o mais a vontade possível, porque já existe muita coisa que eles não têm controle. Muita coisa. Eu diria que a maior parte eles não têm controle. Então naquilo que eles podem ter, nesses detalhes... naquilo que é mais... eu busco ter a sensibilidade de deixar que seja mais reflexível mesmo, porque senão eles se perdem até um pouco da identidade deles mesmo.
2. As vezes (as crianças) estão fazendo uma atividade e eles começam a falar de algum outro assunto que não tem nada a ver... e aí esse assunto leva a uma outra coisa e a outra coisa. E aí se eu não fizer algo... e às vezes eu nem faço... porque eu acho que é natural mesmo que essas coisas aconteçam... mas às vezes eu sinto que é sério.
3. Porque eu acredito que a sala de aula... ela é um ambiente construído coletivamente mesmo. Ele começa com a gente. Começa, em primeiro lugar, com a preparação na cabeça do professor e ele se estende na sala de aula. É um ambiente... e você tem que tá conectado. Você com eles... eles com você... com o que tá sendo exposto.
4. Eu procuro dar um balance. Procuro mesmo, mas a minha tendência é fazer momentos mais comunicativos. Eu diria que eu faço, sei lá, 65-70% de comunicação, interação, de fala mesmo e... enfim, e aí os outros 30-35% a coisa mais individual, mais reflexiva... sobre o processo de treinar a escrita e a leitura... até por que eu acho que eu sou muito social, eu gosto muito de falar e de ver as pessoas falando.
5. Mas essa coisa de você criar o ambiente, de estar atento a tudo, é muito difícil. Você não está bem... você vai performar isso com um pouco mais de dificuldade, vai ser um pouco mais difícil, vai exigir um pouco mais de energia. Por isso é que o ideal é que a gente sempre esteja feliz, esteja sempre disposto. Fisicamente, espiritualmente, mentalmente... mas nem sempre é possível ficar assim, porque a gente não é só professor. Mas é a vida né.. então a gente tem que, com o tempo, com muitas horas, com muitos anos, com muita prática, a gente consegue cada vez melhor a... cada mais, cada vez melhor a dividir... dizer: "vou focar em dar uma aula boa, uma aula eficaz... mesmo eu não me sentindo bem."

Reading across the columns A to D in Table 5.11 permits the complete analytical process to be envisioned. The initial analysis focused on the four constructs of teacher cognition (knowledge, thought, beliefs and decision-making – see column A). Although these constructs were at first considered individually, soon it became evident that their meanings and articulation are intertwined.

The different text marks (underscoring, bold, capitals, and grey shading) on the episodes demonstrate how the constructs of teacher cognition enable multiple coding (e.g., knowledge, **thought**, BELIEFS and decision-making). In episode 1, for instance, the distinctions between thought, knowledge and beliefs are not very clear. The idea of decision-making is articulated as *fragments of knowledge* and concepts of reflective teaching. The five episodes above represent the interrelated nature of meanings which originated from the individual constructs. Sometimes, a whole episode can be considered from one main perspective of coding (e.g., episode 3 mostly represents knowledge, episode 5 represents beliefs) and then other thematisation can be perceived upon more detailed analysis.

Similarly, the coding made in columns C and D, on the right hand side of the table (relationships to interaction and discursive strategies respectively) generate a new dimension which can be analysed through teachers' articulation. In episode 2, for example, Eduardo expresses concerns in relation to his young learners' distractions in the classroom. Uncertainty occurs in his pausing and repetitions of his thoughts and beliefs.

However, the analysis of the episodes considering only the constructs of teacher cognition from individual or separate meanings and their relationships to interaction and discursive strategies is not sufficient to understand the thorough meanings of the narratives. Notably, the analysis suggests that whilst Eduardo articulates the four constructs he is also expressing his experience in relation to interaction. The method he uses to articulate cognition also generates new discursive dimensions.

From these inclusive lenses, it appears that Eduardo articulates cognition of classroom interaction by showing awareness of his professional experience in his stories. His understanding is not only evident from what he knows, believes, thinks and decides about interaction, but also in the way he chooses to articulate his teaching experience. For example, Eduardo seems to be very sensitive to his students' needs and eager to build a harmonious classroom environment to help their learning. By frequently articulating the students' voice (*ah teacher, I don't know*) and evaluating his stories in a rather dramatic fashion (*really serious*, *beautiful*, etc.), he shows his emotional representation of interaction.

In addition, the analysis of Eduardo's episodes shows that the close relation between the four constructs seems to unconsciously occur in teacher's articulation and unintentionally generate multiple interpretations. The analysis also shows that the constructs can be better understood together than individually. In Eduardo's stories, classroom interaction is seen as activities co-constructed with and for students' learning and as a pleasant experience.

The following sections offer similar analyses from other participants' production.

5.4 Participant 2: Lidia

5.4.1 Lidia: background information and the data produced

Lidia is an experienced professional who has been teaching EFL for about 18 years. During the research process, Lidia had been working for about four years in the PEC. According to Lidia, she wanted to participate in the research process because she believed that the reflective nature of the narratives would be positive for her professional development. Her contribution brought many intense reflective moments usually rich in teaching experience.

Her initial education was not in the EFL field, but she holds a specialisation degree in Teaching English Methodologies. Lidia's knowledge seems to come from a combination of academic learning and classroom practice. She also had opportunities to study abroad in English speaking countries and seemed to be comfortable speaking the language, which supports her choice to only use English in her spoken or written narratives.

Lidia's teaching experience is very substantial and her academic knowledge of EFL teaching methodologies seems to be of high level. She has taught EFL to a wide range of levels, age groups and academic situations – from beginners to advanced, from kids to adults, and from PEC to University courses. In her narratives it is possible to identify her knowledge of topics

related to EFL teaching. She demonstrates concern for her students' ability to learn and usually relates such ability to the teacher's role in the classroom. Lidia also refers to a teacher's need to have different *personas* to be able to cope with all the factors which influence and/or affect teaching. In interview three, for example, she says,

> we cannot let students feel the amount of detail that…the amount of stress that we have in mind. So, uh…it is a hard job. That's why you have the personas to try to block this up a little bit. (Lidia, Int. 3)

Similarly to Eduardo, Lidia shows in her narratives the need to create a safe and positive environment to help learners.

During the fieldwork, Lidia participated in all the stages and as seen in Table 5.12, her contribution was extremely rich. She chose to use English in all the narratives (spoken and written) and opted for the oral narratives due to time constraints (she had a busy routine). Both narrative 2 and Interview 3 were made by Skype (which I consider as virtually face-to-face due to the real time character of the conversation, see Section 4.3.1) because Lidia had been busy with administrative duties in the school. The analysis of the data shows that her spoken narratives were much more useful to the current research than the written narratives.

Table 5.12 Information about the data generated by Lidia

Participant 2: LIDIA					
Researchable Actions (RA)		**N. of words**	**Mode**	**Lang.**	**Main focus / notes**
0	**1ST contact**	✓	S	L2	1st meeting with teacher at the PEC, talking about procedures and paperwork.
1	**Interview 1**	2,410	S	L2	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	**Narrative 1**	1,102	W	L2	Focus on teacher's experience and specific interactive activity in the classroom.
3	**Interview 2**	1,853	S	L2	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	**Narrative 2**	1,748	S	L2	Focus on teacher's experience, responding to *teacher Maria prompt*, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom. (via Skype)
5	**Interview 3**	4,729	S	L2	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students. Referring back to Interview 2 and Focus group discussions. (via Skype)
Total		11,842			
6	**Focus group discussions**	19,200*	S	L2	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the PEC after two sets of group discussions.					
Key: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

As seen in Table 5.12, the data produced by Lidia was a powerful material for analysis. Her participation in the interviews and narratives was also prolific. Below are the stages in the analysis of Lidia's production.

5.4.2 Lidia's articulation of knowledge

In Lidia's narratives it is possible to note her personal practical knowledge in the vocabulary she chooses to tell the stories. She uses metalanguage and technical terminology which demonstrate her experience with EFL teaching

(see Section 2.2.2 for metalanguage). Thus, when asked about moments in her classroom which trigged reflection about her teaching practice, Lidia said,

> There are many [moments] that I can say. They are likely to occur... even of course these days. I'm learning all the time, it's a... It occurs when I record myself in class and then I revisit it and I see things that shouldn't be there or why they happen and I reflect a lot upon them. I can tell you for example that the most recent one was a case in which I checked that I am quite repetitive in my delivery of instruction. I say something, I try to... it doesn't matter the level, I try to cut it up in small chunks anyways. So that the procedures are very clear, step by step clear. So I noticed that I am quite repetitive in the instruction. I say for example, just an example 'OK, guys, now I need you to get these slips of paper and you're going to write, I don't know, three sentences, OK? You're going to write three sentences, OK? On the slip of paper, OK?' Yeah. I think I repeat this like four or five times and I go…why? It's quite disturbing. I mean, I shouldn't be doing this. Then, on the next class I tried not to do.... Tried to do it in a different way. I mean, this is one that I can say, there are many, many... I don't know. Another one it was like a big moment I have to say. It was a moment...you know… I was... I... I used to touch students. (Lidia, Int. 1)

Lidia describes above one of the many moments which triggered reflections about her practice. Her professional knowledge is evident in the underlined phrases above. For example, the fact that she records herself, revisits her activities and reflects on her own behaviour can be interpreted as a high level of awareness of EFL teaching and the need to be accountable for her methodologies and classroom actions and reactions. In brief, the idea of awareness originated in psychological studies, and in language teaching it has been related to teaching and supervising, as well as teachers' attitudes, skills and knowledge, as seen in Bailey (2006, Chapter 2). This episode illustrates how reflection (e.g., about repetitive instructions) can represent a teacher concerned with teacher talk time, the quality of teaching and self-awareness. Table 5.13 shows the details of the analysis.

Table 5.13 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
It occurs when I record myself in class and then I revisit it and I see things that shouldn't be there or why they happen and I reflect a lot upon them. I can tell you for example that the most recent one was a case in which I checked that I am quite repetitive in my delivery of instruction.	use of metalanguage and academic language	positioning in relation to her own actions during interaction exemplifying her own actions during interaction
I say for example, just an example 'OK, guys, now I need you to get these slips of paper and you're going to write, I don't know, three sentences, OK?	self-reflective strategies to professional development (action research)	exemplifying instructions to an interactive activity
Another one it was like a big moment I have to say. It was a moment...you know… I was... I... I used to touch students.	reflective teaching	positioning in relation to her actions

In the analysis (in Table 5.13 above), the broad reflection made by Lidia is divided into three main moments: use of metalanguage and academic language, action research, and reflective teaching. The idea of action research here means that Lidia's reflections are based on her own judgement of her actions in class. This links to the notion of action research suggested by Borg (2011) and Wallace (1998). From her self-observation, she was able to see her repeated instructions and the fact that she had physical contact with students and she seems to be willing to change her behaviour in relation to these two themes.

In the EFL teaching literature, topics such as self-observation, instructional strategies, echoing and classroom management are commonly related to the idea of action research. As argued by Brown and Lee (2015, p. 555), action research is a "systematic process of inquiry" performed by a teacher about her own practice. The revisiting of the classroom actions which Lidia presented in her narrative is just an example of action research which

resonates with Gil and Vieira-Abrahão's (2008) view of the theme in the Brazilian context.

The last utterance of this episode (*I used to touch students*) became a recurring theme in teachers' narratives, not only in Lidia's. In one of the focus groups talk, for example, teachers discuss the Brazilian way of teaching in which *physical contact* is part of the cultural behaviour. Apparently, that became a concern for, Lidia perhaps because she wanted to keep her professional distance from her students.

Positioning myself in relation to this topic, I should mention that in more than 20 years of classroom experience, I know that sometimes I tap students' on the shoulder when talking to them and up to now, no student has ever complained or considered it offensive or abusive. Thus, Lidia's worries could be related to her awareness of international patterns of teacher behaviour in the classroom about maintaining distance from students in a professional manner, as well as respecting students' cultural boundaries and ethical principles. This resonates with what Brown and Lee (2015, p. 582) refer to as the "cultural biases" which can interfere in the development of the lesson. Therefore, Lidia probably understands that overdoing it might signify other interpretations in the eyes of a classroom observer, even if the observer is herself (this idea also resonates with Bailey & Springer, 2013).

Lidia's episode shows how she articulates the construct *knowledge*. Similarly to Eduardo, Lidia uses the strategies (shown in Section 5.3.3) in her articulation of knowledge represented in the emerging themes (see Table 5.14).

Table 5.14 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Generalisation	**There are** many [moments] that I can say. **They are** likely to occur... even of course these days. **I am** quite repetitive in my delivery of instruction.
Evaluation	I am **quite repetitive** in my delivery of instruction **there are many, many...** Another one it was like a **big moment**
Uncertainty	Tried to do it in a different way. I mean, this is one that I can say, there are many, many... **I don't know**. you're going to write, **I don't know**, three sentences
Shared knowledge	It was a moment...**you know**… I was... I... I used to touch students.
Articulation of teacher's voice (reference to 1st person)	'OK, guys, now **I need** you to get these slips of paper and you're going to write, I don't know, three sentences, OK? **You're going to** write three sentences, OK? On the slip of paper, OK?'
Articulation of students' voices	No apparent occurrences in this episode.

Table 5.14 above shows that as Lidia talks about being repetitive, she repeats the same idea and her classroom issue is echoed in her discursive strategies (*I am quite repetitive in my delivery of instruction*, or *I noticed that I am quite repetitive in the instruction*, or *Yeah. I think I repeat this like four or five times*). She also articulates her teacher's voice to demonstrate how she gives instructions by placing herself as the teacher in the classroom – she uses *I* (the teacher in class) in contrast to *you* (students/listeners – see phrases in bold). In this excerpt, the marker *I don't know* (underlined) seems to be a parenthetical expression, that is, not part of the instruction in the classroom. Therefore, *I don't know*, brings herself back to the narrative as the teller or narrator and not as a character presented in the first person (see Section 3.4.2 on the literary elements of narrative).

In Lidia's episode, there is evidence of knowledge, but it is not clearly noticeable, making its interpretation rather challenging. The analytical process demonstrates that in the same episode, the link between knowledge and the concept of classroom interaction can have multiple interpretations. For instance, the same utterance can be coded as generalisation and as

articulation of teacher's voice. Therefore, some aspects of knowledge can be considered as less abstract than others, when seen from an overarching perspective. The next sections offer the analysis of the other constructs of teacher cognition.

5.4.3 Lidia's articulation of thought

As mentioned, the articulation of thought can be easily distinguished as knowledge or beliefs. In interview 2, Lidia was asked to talk about classroom interaction and she referred to a group of upper intermediate students about whom she had previously commented. In general terms, this text was interpreted as an extended thinking episode, which can also lead to detailed interpretations.

> You know... I'm going to mention something I have been studying in the graduate course... It hurts me profoundly when I'm in a classroom such as this and a student is quiet. And everybody is talking, and everybody is talking... and everybody has something to say and that student is quiet. And I look at him, I notice and I even make room for his or her response but here's nothing coming back... And I try, and I go back... It's like I'm trying to... and nothing happens. And that puzzles me... In my **multiple personalities**... as teacher... you know. I try to administrate the classroom, think of structures, thinking of vocabulary, the parts of my lesson... everything happening at the same time and the student... and I think 'Is the topic boring? Am I being too aggressive?' Maybe he is more... not a shy student, but a shy person or maybe I have to do something about it. And I try for the rest of the class... if not in the... group, in mini-groups and break that into smaller conversations. And I try to monitor and listen to that student more closely and see if he or she says something. Sometimes yes, it's a case of shyness. Sometimes the person doesn't feel like talking and sometimes I have to understand that. And I mentioned the graduate course 'cause we're talking about the silent period and it is ok to be silent sometimes. We don't know if learning is not taking place. We cannot measure it. It's not true somebody is learning just because somebody is talking. Is that right? That's not true. I can gather evidence though... it is there... it is present. But that really... I have to confess... it puzzles me. I have to do something. (Lidia, Int. 2)

The underlined utterances (in the episode above) represent Lidia's interpretations of thought. The analysis suggests that these utterances function as extracts of thought included in Lidia's narrative. For example,

when Lidia says, *it hurts me profoundly when I'm in a classroom such as this and a student is quiet*, it seems that her thoughts transport her to the moment she has seen a student who is not participating. The idea that it *hurts* her demonstrates thinking is closely related to feeling.

The analysis suggests that Lidia's concern for a student who does not participate in the interaction first develops in her thoughts. This can be seen in the utterance, *I have to confess... it puzzles me. I have to do something*, or *I think 'is the topic boring?'* The fact that the student is not able to participate *puzzles* her and as the teacher, she feels responsible for presenting a *boring* topic. It appears that her feelings are also inserted into both these excerpts, that is, Lidia is confused and concerned – whilst articulating her thoughts she is somehow affected by them. In relation to interaction, Lidia's articulation of thought is interpreted as shown in Table 5.15.

Table 5.15 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
It **hurts** me profoundly when I'm in a classroom such as this and a student is quiet. And **everybody is talking**, and everybody is talking... and everybody has something to say and **that student is quiet**.	students who do not participate in interaction	positioning in relation to students' behaviour in interaction exemplifying problems in interaction
And that **puzzles** me... In **my multiple personalities**... as teacher... you know. I try to **administrate** the classroom, think of structures, thinking of vocabulary, the parts of my lesson... **everything happening at the same time** and the student... and I think 'is the topic **boring**?', 'am I being too **aggressive**?'	teacher's multiple responsibilities which generate students' actions or not – looking for solutions	positioning in relation to teacher's roles and in-classroom decisions and feelings
Sometimes yes, it's **a case of shyness**. Sometimes the person doesn't feel like talking and sometimes **I have to understand that**.	students' difficulties to engage in interaction	positioning towards teachers' roles regarding students' needs
We don't know if **learning** is not taking place. **We cannot measure** it. It's not true somebody is learning just because somebody is talking. Is that right? That's not true. I can **gather evidence** though.	attitude towards learning	positioning towards learning through interaction
But that really... I have to confess... it **puzzles** me. **I have to do something**.	teacher's roles	positioning towards teacher's roles

The relationship to interaction is mainly observed in the analysis of teacher's positioning towards students' learning and needs, and teacher's roles. Lidia does not define interaction or talk about the use of L1 in class, but she shows concern about students' not speaking at all. Although there is no clear definition of interaction, in other moments (such as in focus group discussions) Lidia offered several definitions, such as:

> I think it's the pure exchange, the pure negotiation of ideas and (…) fantasies, it's conversation (Lidia, FG 1);

or

> speaking activities are the basis for real, true, meaningful interaction. First they speak, they practice orally and later on in the same class or later in the future there will be room for interaction (Lidia, FG 1).

These definitions resonate with other teachers' own conceptualisation of interaction, especially the idea of *real interaction*. Later in Section 5.8 I return to this topic.

In the episode, Lidia gives an example of an activity in which all the students are supposed to be interacting, but one *student is quiet*. Regarding thought, Lidia's concerns are closely related to her awareness of students' needs and behaviour and this can be noted in the way she articulates her thoughts. From Lidia's episode, it is also possible to identify the emerging discursive strategies (see Table 5.16 below).

Table 5.16 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Shared knowledge	**You know**... I'm going to mention something I have been studying in the post-graduation course... In my multiple personalities... as teacher... **you know**. I try to administrate the classroom… It's not true somebody is learning just because somebody is talking. **Is that right?** That's not true.
Evaluation	It hurts me **profoundly**… And I try **for the rest of the class**… But that **really**... **I have to confess**... it puzzles me.
Articulation of teacher's voice	and I think '**Is the topic boring? Am I being too aggressive?**'
Uncertainty	**Maybe** he is more... not a shy student, but a shy person, **or maybe** I have to do something about it. **We don't know** if learning is not taking place. **We cannot measure it**. It's not true somebody is learning just because somebody is talking. **Is that right? That's not true**.
Generalisation	…I **try** to monitor and **listen** to that student more closely and **see** if he or she **says** something.
Articulation of students' voices	No apparent occurrences in this episode.

An interesting point from the Table 5.16 above is that Lidia does not talk as if she is the student, but as if she, the teacher is thinking or reflecting at a moment during the lesson (*Is the topic boring? Am I being too aggressive?*). Although she is talking about a past experience, Lidia tells her story using present tenses as her thoughts are vivid and the story is represented in the here and now.

The analysis demonstrates that Lidia's articulation of thought can be interpreted with other constructs, such as knowledge or beliefs. Sometimes, the idea of feelings and reflections can be interpreted as thought as well. In addition, when seen from an inclusive overall perspective, thought, as articulated in narratives, can be considered as less abstract than it is usually perceived depending on the context presented in the story.

5.4.4 Lidia's articulation of beliefs

Lidia's articulation of beliefs is presented in the episode (below) which responds to the Teacher Maria's prompt (see Section 4.3.2). Therefore, the

similar situation she mentions in the first line of the episode means that she experienced similar circumstances to the ones teacher Maria did (examples in Appendix 8). In her case, Lidia had to change her initial plans to make sure students were learning, or at least showing evidence of learning.

> Uhh. Yes. I myself have faced a similar situation time and time again. Uhh, in my experience, students uhh when they are trying to perform an oral activity and do not perform as expected, mainly it's because they are not…not only they are not prepared for the activity, but the tendency is that they use only previous vocabulary and grammar that they have been exposed already. Since you do not mention the level, basic, intermediate, even for advanced I've seen this happening. Uhh. The tendency is that they only use vocabulary and language that they feel comfortable with. So…I'll give you an example. So, you expect them to use a present perfect tense in a…, in a…in likes or dislikes, or things that they…that they uhh they have already … they have already …done or something. Because you mention likes or dislikes, but uhh…even if it's present perfect, for example, the tendency is that they only use the simple past. They are not aware that even if they have been exposed already to present perfect, because they need time. They need time. I don't know how long that time is. In my experience it is a long time…uhh. So…It is quite frustrating because you give them exercises, they have oral and written practices, and when it is time to engage in a simple oral activity, they will just do whatever they are prepared to do. I think it happens in 90% of the cases. 90% of students, vast majority, will only perform using a…sublanguage? If you will. Whatever it's simpler for them. Because in the end, I think that's how the brain works. I think the brain wants to communicate fast and uhh there's just no time for sophisticated language at that time. And you mentioned that Maria tried a different approach? (Lidia, Narr. 2)

The underlined utterances in the episode above represent Lidia's articulation of beliefs. Lidia's beliefs are built around her everyday experience which leads her to conclude that if students are not performing according to plan, *it's because (…) they are not prepared for the activity*, or because they only use *previous vocabulary and grammar that they have been exposed already*, or because *they need time*. These examples of beliefs can be seen in Table 5.17.

Table 5.17 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
…when they are trying to **perform** an oral activity and **do not perform as expected**, mainly it's because they are not…not only **they are not prepared** for the activity…	sometimes students are not prepared to perform the planned activity	describing problem in interaction
…they use only **previous vocabulary and grammar** that they have been exposed already. …if it's **present perfect**, for example, the tendency is that **they only use the simple past**.	students prefer to use what they already feel comfortable with	positioning towards students' learning strategies and lesson planning
They are not aware that even if they have been exposed already to present perfect, **because they need time**. They need time. I don't know how long that time is. **In my experience it is a long time**…	teachers need to be aware that students need time to learn.	positioning towards decisions made during interaction – giving time to student learning process
I think **it happens in 90% of the cases**. 90% of students, **vast majority**, will only perform using a…**sublanguage**?	most of students have similar learning experience	measuring students' performance
I think that's **how the brain works**. I think the brain wants to communicate fast and uhh there's just **no time for sophisticated language** at that time.	communicative strategies require easy paths – fluency over accuracy	exemplifying how the brain works in interaction

The analysis suggests that Lidia refers to interaction in relation to students' performance and learning processes. In other words, she identifies students' methods and needs, such as using a short cut (instead of the present perfect, students use simple past), demanding enough time to process new information, and considering fluency more important than accuracy (consciously or not). Lidia uses most of the discursive strategies, but there is no apparent evidence of the articulation of teachers or students' voice in this episode (see Table 5.18 below).

Table 5.18 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	**they are** not prepared but the **tendency is** that they use only previous vocabulary
Evaluation	**mainly** it's because So…It is **quite** frustrating I think it happens in **90%** of the cases **vast majority**, will only perform using a…
Shared knowledge	vast majority, will only perform using a…sublanguage? **If you will.** So, **you** expect them to use a present perfect tense because **you** give them exercises
Uncertainty	**I don't know** how long that time is
Articulation of teacher and students' voices	No apparent occurrences in this episode.

The table shows that although Lidia seems to be certain about the *90*% of cases where students use short cuts to communication, she is uncertain about the time students need to process new information and demonstrate learning. Thus, in Lidia's articulation of beliefs, her personal practical knowledge recurs. In other words, the evidence of beliefs in her episodes analysed in this section shows that they are mainly based on her knowledge of her profession. Lidia also adopts a dramatic tone in her stories, as seen in Eduardo's narrative.

5.4.5 Lidia's articulation of decision-making

In Lidia's data analysis, the episode below represents one of the most detailed in relation to decision-making. Lidia describes an activity with upper intermediate students in which the polemic topic extracted from the textbook was prostitution. Her students were not talking about the topic and Lidia had problems understanding the students' limitations. Note that she had to adjust her lesson plans to suit the students' needs and help the student to learn.

> The role of the teacher in an activity such as this would be exclusively of a mediator, setting the time and bringing the conversation up in case of breakdowns. Later on in this activity, I noticed that the girls were not talking anymore. They clearly had no more convincing ideas to fight for their opinions. I asked them what happened and they told me they were embarrassed to talk about sexuality. My counter argument was that I didn`t believe that, on this day and age, girls would still shy away from topics such as that, and they revealed that they were not used to talking about it so openly, and on top of that, they didn`t feel confident talking to guys about it. Then I decided to bend the topic a little, switching from more judgmental points of view to a more political and social take. Instead of trying to argue about the causes of prostitution in the world (and specifically in Brazil) I moved the topic on to what laws should be improved so that women in the world weren`t suffering as much violence as they are these days. (Lidia, Narr. 1)

The underlined sentences represent the main decisions made by Lidia during an interactive activity. Note the evidence of teacher knowledge and beliefs

behind her decisions. For example, she believes *the role of the teacher is (…) of a mediator* and she explains her actions – e.g., she *noticed*, *asked*, *argued* and then *decided* to *shift* the direction the interaction was taking. This sequence of actions can be interpreted as in-site decisions (as seen in Section 5.3.6) which depend upon the teacher knowing EFL teaching methodologies and planned actions. For example, the analysis shows that Lidia, as the *mediator* in the activity notices the problem, creates a *counter argument*, and makes changes. Thus, she is able to monitor students, assess the problem and find a solution.

Table 5.19 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
The role of the teacher in an activity such as this would be exclusively of a **mediator**, **setting the time** and **bringing the conversation up** in case of breakdowns.	teacher's role as mediator to keep the pace of the activity	positioning towards teacher's roles during interaction – conversation needs to develop
I **noticed** that the girls were not talking anymore. I **asked** them what happened My **counter argument** was that I didn`t believe that, on this day and age, girls would still shy away from topics such as that **they didn`t feel confident** talking to guys about it. Then I **decided** to bend the topic a little, **switching** from more judgmental points of view to a more political and social take. I **moved** the topic on to what laws should be improved	sequence of teacher's actions and decisions are based on students' embarrassment – teacher notices, asks about, counter argue, decide to switch and move on.	exemplifying interaction exemplifying students' attitude during interaction exemplifying teacher's reactions to students' attitudes positioning in relation to topic and need to change focus

In Table 5.19, Lidia's articulation of decision-making is analysed in relation to interaction. In the episode, students are not performing appropriately, which affects the development of the interaction. In order to continue following the lesson plan, Lidia changes some of the procedures to benefit student learning. Table 6.20 gives the analysis of the discursive strategies in Lidia's articulation of decision-making.

Table 5.20 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Generalisation	**The role of the teacher** in an activity such as this would be exclusively of a **mediator** I didn`t believe that, **on this day and age**, girls would still **shy away** from topics such as that
Evaluation	…would be **exclusively** of a mediator they were not used to talking about it **so** openly Then I decided to bend the topic **a little** They **clearly** had no more convincing ideas to fight for their opinions
Articulation of teacher and students' voice	No apparent occurrences in this episode.
Shared knowledge	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

This episode presents several cases of evaluation which add a dramatic effect to the story. As the topic offered by the textbook was challenging, it seems reasonable to infer that Lidia's shift in the focus of the discussion to the political/social spheres became a suitable alternative to keep students producing in a safe environment.

This detailed episode, which represents decision-making, shows that Lidia is knowledgeable about teaching methodology. She is able to evaluate a situation and make interactive decisions which clearly affect her lesson plan, but also benefit the students' the learning process. As seen in the analysis of other constructs, her professionalism also results from her concerns and attitude.

5.4.6 Discussion of Lidia's data analysis

The analysis shows that Lidia's articulation of the constructs of teacher cognition is similar to Eduardo's. Correspondingly, the constructs and their interrelation to interaction can be understood from diverse perspectives from her data. In other words, understandings of the different constructs are not

clearly divorced from one another. The example of Lidia's data analysed from an inclusive/overall perspective shows all the analytical steps considered.

Table 5.21 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. So, if this* was happening in a real classroom, this situation, I would definitely try to wrap this up …I would go back to a previous step and I would simply ask her…you know, the student. 'Would you repeat your question, please?' 'What is it again?' 'Do you play sports?' or I would try different techniques. Asking, uhh, repeating the question, echoing the question, uhh, paraphrasing. I would try a lot of techniques. Until I see if she gets her question right. **If she gets her question right and the partner answers something than sports, I would uhh…I would… I would go back to his answer**. And I would say 'OK.' * *e.g., a student not talking during interaction.*	Exemplifying Positioning	Generalisation Uncertainty (pauses, if) Articulation of the self Evaluation (definitely)
	2. In this kind of activity I just reported to you which is a very controlled oral practice, activity, uhhh…THERE'S NO REAL SPACE FOR MOTHER TONGUE. BUT IF WE'RE ENGAGED IN A TASK, A FREER SPEAKING ACTIVITY, AND WHILE THEY ARE PREPARING THEIR CONVERSATION, WHILE THEY ARE… I THINK IT IS ACCEPTABLE. YOU KNOW WHY? BECAUSE THEY ARE THINKING IN ENGLISH, THEY ARE TRYING TO GET THEIR TRAIN ON TRACK, AND uhh SOMETIMES THEY DON'T HAVE THE TOOL TO BUILD UP LANGUAGE. Uhhh. AND THEY WILL FALL INTO PICKING THEIR MOTHER TONGUE. Ok, in our case is Portuguese. As long as this conversation is related to the activity they're…they are trying to…to perform, I think it is acceptable.	Exemplifying Positioning (L2/Interaction)	Uncertainty (if, pauses) Uncertainty Evaluation (very controlled Generalisation
	3. And I came to them and asked them they could have a placement test. **They can have a placement test. And be moved on.** We don't want to keep students trapped. You know. And all the four students, they said 'No, Lidia, I want to revise. That's OK. I want to start from the zero beginning'. I said it could be boring at times, because…. 'No, no. We want to revise.'	Exemplifying Positioning (students' performance and development)	Generalisation Shared knowledge (you know) Generalisation Articulation of students voices
	4. I DO BELIEVE THAT ALL THE ACTIVITIES THAT YOU PLAN THEY HAVE TO HAVE THE RIGHT PROPORTION. Uhh…again, if you think on **communicativism**, interaction is the heart, the body and soul of a lesson. As much as possible, students need to be able to uhh… interfere (if you will) in the lessons. Not only in the moments that you request them that they participate in pairs or trios or whatever, but in any moments.	Defining Positioning	Shared knowledge (if you will) Evaluation (as much as possible)

* All episodes belong to the same interview (Lidia, Int. 3)

Table 5.21 above offers a sample of the analysis developed through an inclusive lens. As presented in Section 5.3.7, Columns A to D in the table represent the foci of the three analytical stages: the four constructs,

interaction and strategies. The episodes have multiple coding which demonstrates the interrelation between the constructs. Then, another level of analysis shows the connections to both the idea of interaction articulated by teachers and the discursive strategies which occur in the story.

For instance, Lidia's episodes above reveal that there is an interrelation between knowledge and decision-making (e.g., *I would try different techniques*), thought and decision-making (e.g., *I would go back to his answer*), knowledge and beliefs (e.g., *all the activities that you plan they have to have the right proportion*), among others. At the same time, it shows how the focus on interaction is explored as well as how Lidia chooses to tell the story.

Similarly to the results found in Eduardo's data (Section 5.3), in Lidia's articulation of teacher cognition, the relationships between the constructs develop gradually. Thus, the analytical stages can be seen as combined understanding of the teacher's narrative.

Lidia articulates teacher cognition of classroom interaction by showing her experience in the narratives. Such experience is shown in her stories about her practice and in her articulation of knowledge, thought, beliefs, and decision-making. An example of that is her concern about her students' placement, development and performance in class. Lidia also articulates her own voice, bringing herself into the action as her class *happens* at the moment she recalls her stories. Compared to Eduardo's dramatic tone, Lidia's stories are intense in the sense that she re-lives her experiences while telling the stories. Her evaluation of the stories is usually made by

expressions such as *a lot, really* and *pure* (Sections 5.4.2, 5.4.3). Finally, Lidia shows her experience and knowledge as a professional. Her beliefs, thoughts and decisions seem to have their basis in such knowledge and experience.

5.5 Participant 3: Flora

5.5.1 Flora: background information and the data produced

Flora is the most experienced teacher of all the participants. She has been working in the EFL area for more than 30 years. At the time of the fieldwork she had been working at the PEC for about 2 years. Her participation in the research process was very valuable due to her extensive and varied professional experience.

She has a degree in English language, had the chance to study abroad, and often travels to English speaking countries, giving her confidence in her spoken English. Flora's experience stands out in her stories together with her expressed passion for teaching and her students, especially the younger ones. Her narratives are intense and often dramatic, with vivid descriptions of feelings and actions.

Similarly to Lidia, Flora has been teaching at different levels and settings, from young learners to adults, from beginners to advanced levels, from PEC to University courses. At the beginning of her career, she ran her own private English course, teaching young learners in the community. Currently, she

has been teaching various age groups, but mainly focusing on young learners (5-9 years old).

Flora's narratives (spoken and written) were produced in English and she participated in most stages of the fieldwork (see Table 5.22 below). She chose to write her narratives, but produced much more when speaking, usually passionately, about her classes. Her contribution to this study also has several deep reflective moments. Table 5.22 below displays all the data produced by Flora in number of words and the focus of each data.

Table 5.22 Information about the data generated by Flora

Participant 3: FLORA					
Researchable Actions (RA)		**N. of words**	**Mode**	**Lang.**	**Main focus / notes**
0	**1ST contact**	✓	S	L2	1st meeting with teacher at the PEC, talking about procedures and paperwork.
1	**Interview 1**	3,424	S	L2	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	**Narrative 1**	316	W	L2	Focus on teacher's experience and specific interactive activity in the classroom.
3	**Interview 2**	3,046	S	L2	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	**Narrative 2**	376	W	L2	Focus on teacher's experience, responding to *teacher Maria prompt*, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
Total		7,162			
6	**Focus group discussions**	19,200*	S	L2	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the PEC after two sets of group discussions. **Key**: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

As noted in Table 5.22, her participation in the interviews was prolific and thorough, and her contribution in the focus group discussions was stimulating and inquisitive. Below I analyse the data generated by Flora.

5.5.2 Flora's articulation of knowledge

Flora's narrative shows she is knowledgeable of EFL teaching and most of all, is concerned with her students' wellbeing. Asked if she had moments she considered to be classroom interaction and if students were able to use the target language at the beginning of the semester, Flora said,

> No, not really. Because in the first two days there was mainly the icebreaking. I mean... there was one group – It was interesting... I tried to have a kind of an interaction. It was an activity they could speak English, they are level 3.* So they can make good use of the language, so we had the game but not really something intensive. I've had only the very first class. Today I'm gonna have the second class with them, so we're still getting to know each other, getting to know the book, I'm still setting the tone so I don't think I have had real interaction.
>
> Here at the PEC we have some advantages, especially because of the lab so what I do is send them [students] as much as I can to the lab and... so they have more time to use the language... I can ask them to do the exercises in English, I ask: trying to enlarge this short period of time we have because if you think, three hours a week is nothing. Thinking of the whole process it is nothing. So interaction for me is the only way we can achieve our objectives. (Flora, Int. 1)

* [intermediate level – 3rd year, teenager students]

In the episode above, Flora utilises metalanguage to refer to classroom moments (*icebreaking*, *getting to know each other*, *setting the tone*, and so on). She also demonstrates that her knowledge comes from her experience when she acknowledges that three hours a week is not enough input time for students to learn a new language. For that reason, she asks her students to spend some extra time in the language lab doing exercises. This attitude also implies a commitment to her learners. Table 5.23 below presents the

relationships between knowledge and the idea of interaction in Flora's narrative.

Table 5.23 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
Because in the first two days there was mainly the **icebreaking**. so we're still **getting to know each other**, getting **to know the book**, I'm still **setting the tone** so I don't think I have had **real interaction**.	use of metalanguage, academic language and stages of lesson (icebreaking, knowing each other, knowing the book, interacting)	exemplifying stages of lesson for 1st days of semester
So they can make good use of the **language**, so we had the **game** but not really something intensive. so they have more time to **use the language**... I can ask them to do the exercises in **English**	students' use of the target language, involvement activity (game)	positioning towards the use of language exemplifying interactive activities
three hours a week is nothing. Thinking of **the whole process** it is nothing. So **interaction for me is the only way we can achieve our objectives**.	appropriate time for students to be exposed to the language and need to interact	defining interaction

This episode shows that knowledge has a close link to the stages of the first lessons (icebreaking, getting to know each other, and so on) and teachers' attitude towards students' development. In addition, the analysis suggests that knowledge also relates to thought, beliefs, and reflection indicating teacher's attentiveness to learners' making improvements.

Concerning the relationship to interaction, whilst Flora tells her story, she also exemplifies the stages of a lesson before they happen because in the first class she did not consider her time with students as *real interaction*. Although she describes interaction as *the only way to achieve our objectives*, Flora does not seem to count the initial class as a good example of that. This distinction (interaction vs. *real interaction*) suggests a relation to the appropriate use of the target language which students might not fully perform in the first classes during the *icebreaking* stage *(*e.g., *I don't think I have had*

real interaction and *a kind of an interaction)*. In contrast to Lidia's opinion that students using L1 to achieve a purpose in L2 is acceptable (e.g., Table 5.21), Flora does not see moments such as *icebreaking* as proper interaction. Table 5.24 below offers some examples of the discursive strategies in Flora's episode.

Table 5.24 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Generalisation	what **I do is send** them [students] as much as **I can** to the lab **it is** nothing interaction for me is the only way we can achieve our objectives
Evaluation	**mainly** the icebreaking It was **interesting** **real** interaction
Shared knowledge	this short period of time we have because **if you think**
Articulation of teacher's or students' voices	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

Table 5.24 shows that in this episode there were no apparent occurrences of uncertainty or of articulation of teacher and students' voices, but Flora does use this strategy in other episodes.

The idea of PPK in Flora's articulation is embedded in experience in the classroom and a pragmatic approach to problems (students are motivated to go to the *lab* for extra exercises). There is a recurrence of the relationship between knowledge and experience in other Flora's episodes, as well as in other participants' narratives. Flora also promotes the idea of *real interaction* which has already emerged in Eduardo and Lidia's narratives. This is an important theme to this study because it questions the conceptualisation of *interaction* as it has been discussed up to this point and which will be seen in other participants' narratives.

5.5.3 Flora's articulation of thought

In Flora's production, as in the previous data studied, thought can be observed in two ways: at specific moments of the story, in extracts of thought, and as extended thinking episodes. Because the understandings of the constructs are challenging, sometimes neither the extracts nor the extended thinking episodes are easily analysable. Flora was asked to talk about interactive activities and if her approach to interaction made an impact on learners. She explained:

> Yes, because one of the things I don't see a lot is the story of shame, you know. 'I'm ashamed of speaking I mean...to make a mistake and you're going to laugh at me'. Of course they make mistakes of course and there are laughs, but we usually manage that without making it a big issue. Because what I always tell them is 'look, we all make mistakes, so if I make a mistake or you make a mistake this is something natural, normal. We even make mistakes, horrible mistakes using Portuguese, imagine in a different language'. So I don't have problems with interaction and this is why I was so desperate with that one group I couldn't set the tone for... because I had this experience last Saturday, I had to replace a teacher and first of all, the profile was different from what I was expecting. Saturday afternoon I was expecting adults, no...teenagers. And I, myself was... you know I was tired, I have just eaten so because of this I've had to have fun otherwise I would fall asleep and in the end they gave me feedback '*ai, teacher, legal, nós não dormimos*'*, 'Ahn?'. Because they had to stand up, I didn't put them to dance but sometimes I do. (Flora, Int. 2)

* [translation: ah teacher, nice, we did not fall asleep]

This text was analysed as an extended thinking episode in which Flora remembers some situations she experienced with her students. In addition, the underlined utterances are seen as evidence of teacher's thought (*the story of shame*, *mistakes*, *problems with interaction*, and so on). Table 5.25 shows some examples of how the extracts relate to the idea of interaction.

Table 5.25 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
because one of the things I don't see a lot is **the story of shame**	moments in which students might feel embarrassed to interact	positioning towards students' feelings in interaction
Of course **they make mistakes,** of course, and there are **laughs**, but we usually **manage** that without making it a big issue	mistakes students might make, but which she is able to manage	positioning in relation to teacher's roles (to manage problems) and in-classroom decisions
So **I don't have problems with interaction** and this is why I was so desperate with that one group I couldn't set the tone for...	problems with interaction	positioning towards one specific problem (the one group)
I didn't **put them to dance** but sometimes I do	teacher's possible actions to provide interaction and kinaesthetic activity	exemplifying a kinaesthetic activity she might use

Flora relates her teacher thoughts to interaction in a subtle way. Table 5.25, shows her position in relation to students' feelings and teacher's roles. The idea of interaction is general and not clearly stated. Also, the example of a kinaesthetic activity (or *physical activity* as seen in Brown and Lee, 2015) is given as the suggestion of a possible step she can take. In this example, it is not clear whether the dancing activity she mentions occurred as interaction between the students.

The discursive strategies in the analysis of Flora's thought follow the pattern encountered in the other participants' analysis (e.g., Eduardo and Lidia). Of course, from one teacher to another, it is possible to notice the subtle nuances which are inherent in each individual's discourse (see Table 5.26 below).

Table 5.26 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	one of the things **I don't see** a lot **is the story** of shame they **make mistakes** of course and **there are laughs** **this is** something natural, normal.
Shared knowledge	one of the things I don't see a lot is the story of shame, **you know**. **you know** I was tired
Evaluation	We **even** make mistakes, **horrible** mistakes I was **so desperate** with that one group
Uncertainty	**if** I make a mistake
Articulation of students' voices	**'I'm** ashamed of speaking I mean...to make a mistake and **you're** going to laugh at me' **ah teacher**, nice, **we** did not fall asleep
Articulation of teacher's voice	look, **we** all make mistakes, so if I make a mistake or you make a mistake this is something natural, normal. **We** even make mistakes, horrible mistakes using Portuguese, imagine in a different language **Ahn**?

In this episode, Flora offers several examples of articulation of teacher's voice. In the utterances presented in the table, she as the teacher talks directly to the students, as if her students were there at the moment of telling her story. The use of *we* in the examples presented is visibly 'exclusive', that is, the teacher is talking to her students and including only them in her thoughts. Because the teacher is articulating her own voice in action, the *we* in the examples refers to Flora and her students and excludes the researcher-as-listener. The analysis shows that this example represents the exclusive 'we' because the teacher uses *look* at the beginning of the utterance (as if she were talking to her learners) to call her student's attention to her explanation about making mistakes. The notion of the exclusive 'we' is explored in Handford (2010).

The articulation of students' voices is also noted in the examples above. These utterances embody several characteristics. For example, Flora speaks *for* her students (in their place) as if the class was happening in front of her eyes. *We* in this case is also exclusive: *we did not fall asleep* suggests that the class was interesting and students (not the teacher or the researcher-as-

listener) did not fall asleep (further explanation in Section 4.4.5). Finally, as seen in Eduardo's episodes, Flora's also uses the term *teacher* (when representing her students' voices) even when student's voice is articulated in Portuguese (Original version: *Ai, teacher, legal, nós não dormimos*). Later in the final discussion I revisit this topic.

Thus, the analysis shows that Flora's articulation of thought can be interpreted in relation to knowledge and experience. It is evident that her long experience in the classroom guides her thoughts. In addition, as seen in the articulation of Lidia and Eduardo, Flora also gives a dramatic tone to her stories, demonstrating she is emotionally driven when talking about her practice.

5.5.4 Flora's articulation of beliefs

In Flora's episode below, her articulation of beliefs is connected to her classroom decisions. At the same time as she makes assertions (*children interact so much*…), she conceals her beliefs by action (*I chose the pairs*). Knowledge also plays its role as the basis of her beliefs. Her idea that children *interact so much*, for example, is based on her experience with all age groups, which also helps Flora identify the problem – that children need more control. Finally, when she chooses which pairs work together, this implies that she believes she needs to do it to improve students' performances.

> I don't think interaction is a problem with me, I don't think so. At least it hasn't been so far. But in different levels, children... they interact so much that you have to do things to keep them under control. And this arrangement of classroom, the same one that I used to make them speak to each other is good because you control and there is real pair work. Of course I had to cheat when

> I chose the pairs I chose one good student to one weak or intermediate one and what I notice is that they help each other. And I have done some blackmailing 'You're responsible for your partner'. Today one of them arrived late and the partner was in despair 'how am I gonna do without a partner?', "Teacher, am I going to get zero?', 'no, zero, no', 'but are you going to do anything with my grade?', 'I don't know' and when she saw the girl coming 'pelo amor de Deus, você não me falte nunca mais'* because they are afraid of having any loss... grade loss in case the partner doesn't come. And when things like these happen I have to admit that care work can be really effective. With young groups I have found out that group work is not the best choice. (Flora, Int. 2)

* [Translation: For God's sake, never be absent again]

The episode above represents a set of beliefs Flora expresses about her teaching. From the first utterance *I don't think interaction is a problem with me*, Flora offers a list of her general teacher beliefs (*children interact so much*, the *arrangement of the classroom is good*, she chooses students to pair up, they *are afraid of having grade loss*, and *group work is not the best choice* for *young learners*). Table 5.27 shows the relationship between the articulation of beliefs and interaction in Flora's episode.

Table 5.27 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
I don't think **interaction** is a problem with me	she can manage interaction	having control on interaction
in different levels, **children**... they **interact so much** that you have to do things to keep them under control.	children interact differently from other age groups	positioning towards students' learning and interaction
this **arrangement of classroom**, the same one that I used to make them speak to each other is good because you **control** and there is **real pair work**	classroom management affects students' pair work and language learning	positioning towards decisions made during lessons – teacher controls students' pairing exemplifying actions to provide effective interaction
I chose the pairs I chose one good student to one weak or intermediate one and what I notice is that **they help each other**		
I have to admit that **care work** can be really effective. With **young groups** I have found out that **group work** is not the best choice	different groups implies in different needs and results	exemplifying actions which are effective or not

Thus, as mentioned above, in this episode, Flora is not describing specific interaction in her classroom, but stating the actions which work or not for certain age groups. Her experience with all the groups and levels is shown in

her confident statements of beliefs. Table 5.28 below shows the occurrence of the emerging themes.

Table 5.28 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	I **don't think** interaction **is** a problem with me they **interact** so much that you **have to do** things **to keep** them under control
Evaluation	they interact **so much** there is **real** pair work I have done some **blackmailing** **pelo amor de Deus** [for God's sake] care work can be **really** effective
Uncertainty	I don't know
Articulation of teacher's voice	**You're** responsible for **your** partner **No**, zero, no **I** don't know
Articulation of students' voices	Teacher, **am I** going to get zero? How **am I** gonna do without a partner? …but **are you** going to do anything with **my** grade? **Teacher**, **am I** going to get zero? For God's sake, never be absent again
Shared knowledge	No apparent occurrences in this episode.

As noted in Table 5.28, some of Flora's utterances have negative connotations, before she explains an action. Both ideas of *cheating* and of *blackmailing* appear as her teaching strategies. For example, she manipulates the pairing to help students improve their language production, and her blackmailing makes students responsible for their presentation.

Flora's articulation of beliefs suggests several moments when she articulates in her own voice as the action moves to the moment she speaks. In fact, in the episode presented in this section, there is a dialogue between Flora and one of her students in which both teacher and student have their voices represented as if they were in action at the moment she speaks (see Table 5.28). The analysis suggests that this strategy of using direct speech in the narrative seems to help the teacher visualise the moments she talks about. This view resonates with Flora's articulation presented here.

5.5.5 Flora's articulation of decision-making

Decision-making is relatively easy to identify in Flora's narratives, even when closely connected to other constructs. For example, when asked about a problem she had overcome in her classroom, Flora described an episode which happened in her group of adult students.

> Once all my class plans started failing, and silence in class was more and more touchable, my despair also started reaching higher and higher levels. I always had the feeling that they were unhappy there. They used to respond to my questions promptly, the written tasks and exams were good or very good. But the silence was worse and worse. I asked for help, people gave me suggestions which I eagerly tried. There were debriefing moments, but I couldn't figure out what the actual problem was, nor find a solution for it. At these moments they used to tell me there was nothing wrong with me, nor with my classes. Semester was slow and tiring, about one month before the end of the term, I had one more debriefing day which I decided to call 'Washing up Day'. Total surprise, they simply said they didn't like each other and that they didn't feel comfortable to talk to each other (not even in Portuguese). Amazingly after this 'DR'*, things started clearing up and improving and finally reached an average comfortable level. (Flora, Narr. 1)

* [DR is a common acronym used in Portuguese which means *the relationship talk*]

The analysis of Flora's decisions shows that at the beginning of her narrative she states a problem (her planning was *failing* because there was a strange silence in the classroom). The teacher took several measures to fix the problem (*asked for help*, *debriefed* her students, repeated the *debriefing*, and found a solution). The whole process lasted almost the whole semester, but in her story the problem was solved. Table 5.29 offers a detailed analysis of Flora's decision-making and its relations to interaction.

Table 5.29 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
Once all my class plans started **failing**, and **silence** in class was more and more touchable, my despair also started reaching higher and higher levels.	to identify a problem of students' interaction in a specific group	positioning towards a problem – students do not interact
I **asked for help**, people gave me **suggestions** which I eagerly **tried**. There were **debriefing** moments, but I couldn't figure out what the actual **problem** was nor **find a solution** for it.	to start tackling the problem trying to find a solution	defining actions to improve interaction in the group
…about one month before the end of the term, I had **one more debriefing day** which I **decided to call 'Washing up Day'**. Total surprise, they simply said **they didn't like each other** and that they didn't feel comfortable to talk to each other (not even in Portuguese).	to talk to students one more time, identifies the real problem (students' feelings toward each other)	repeating actions to find solutions identifying real problem
Amazingly **after this 'DR'*, things started clearing up and improving** and finally reached an average comfortable level.	to move on after identifying problem	reaching an acceptable level of interactivity among students

The analysis shows that Flora explores a moment in her experience when interaction was not happening effectively and after she had identified the problem she starts a quest to find a solution. Her decisions are mainly related to her personal practical knowledge and experience, that is, the fact that she looked for help among her peers suggests she is aware that she can benefit from a second opinion. Also, even though her students do not say anything (until she insists), Flora is sensitive enough to understand the strange atmosphere in the classroom. Thus, her decisions are towards finding solutions to help students interact effectively and improve their production in the target language. Table 5.30 offers the details of this analysis in relation to the discursive strategies used.

Table 5.30 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Generalisation	Once all my class plans started failing There were debriefing moments
Evaluation	silence in class was **more and more** touchable my **despair** also started reaching **higher and higher** levels the silence was **worse and worse** suggestions which I **eagerly** tried Semester was **slow and tiring** I decided to call '**Washing up Day'** **Total** surprise, they **simply** said they didn't like each other **Amazingly** after this 'DR', things started clearing up
Articulation of teacher and student's voices	No apparent occurrences in this episode.
Shared knowledge	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

Interestingly, in this episode, most of the sentences have evaluation as the leading discursive strategy. The intense moments she lived until she felt comfortable with her class are somehow re-lived by Flora. She uses expressions such as *more and more*, *higher and higher*, *worse and worse* to emphasize the "progressive change" (Carter & McCarthy, 2006, p. 771) that happens as the story develops.

In this episode Flora's articulation of decision-making, it is possible to see some patterns which occur in her narrative. First, Flora's knowledge and experience is evident in her decisions, demonstrating that there is a close connection between the constructs. Then, the dramatic tone in her stories is evident in all her episodes of narrative and is discussed in the next section.

5.5.6 Discussion of Flora's data analysis

Flora articulates the four construct of teacher cognition similarly to Eduardo and Lidia. The analysis shows that the four constructs of teacher cognition also act together to determine meanings and understandings. Therefore, although the constructs were analysed individually, they show an interdependent relation to one another and all of them to the idea of

interaction and to the discursive strategies explored in the current study. Table 5.31 offers an inclusive, overall analysis with multiple coding of the episodes.

Table 5.31 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. My students stay in class one and a half hour usually or three hours on Saturday. So **they have to enjoy coming to class**. Class has to be a fun moment, a moment when they relax, they meet people... they meet people they like, if they don't like at least they have to stand each other so **I THINK IT IS IMPORTANT TO HAVE A NICE ENVIRONMENT NOT ONLY FOR ME, BUT ALSO FOR THEM TO ENJOY BEING HERE**. And once you enjoy being in a place, I DO BELIEVE IT IS EASIER FOR THEM TO CO-OP ON THE PROCESS, ON THE ACQUISITION PROCESS. (Flora, Int. 1)	Exemplifying (class has to be fun) Positioning (teacher's role to manage and plan lesson so that students are relaxed in the process to acquire language)	Generalisation (nice environment) Uncertainty (if students don't like it) Evaluation (fun, important, nice)
	2. It depends on the age. For example, WITH THESE YOUNG ONES IT'S A MATTER OF KEEPING THE AMOUNT OF CONTROL BECAUSE THEY DO INTERACT TOO MUCH. **The interesting thing with these young ones is they tried to use the target language ... it's something very important for them and sometimes they have a very interesting interlanguage**, you know, they mix Portuguese and English or even better I have seen them creating words... the story of the world in Portuguese, they change the intonation... they say that it's English. THE YOUNG ONES ARE... NO PROBLEM AT ALL... I MEAN... CONCERNING INTERACTION, NOT WITH ME, NOT AMONG THEMSELVES. (Flora, Int. 2)	Exemplifying (interaction and age groups) Positioning (L1/L2 and language production)	Generalisation Evaluation (too much, interesting, even better, at all) Shared knowledge (you know)
	3. I DO BELIEVE IN LESSON PLANS, BUT I ALSO BELIEVE IN IMPROVISATION AND THIS IMPROVISATION HAS PROVED TO BE EFFECTIVE MANY TIMES. Another thing that has helped me to be less frustrated is to have a general knowledge of my students, their personalities, likes and dislikes. BY DOING THIS, I INCREASE MY POSSIBILITIES OF FAILING WHEN I CHOOSE ACTIVITIES. **There's no perfect activity for all the groups you have**. I BELIEVE MY CLASSES HAVE TO HAVE A GOAL TO BE ACCOMPLISHED, AND I ALSO BELIEVE I HAVE TO ENJOY MY CLASS AND HAVE FUN AS WELL AS MY STUDENTS. I can say I have accomplished my goals when students understand and use the topic vocabulary and structure and nobody looks at the watch praying for the end of my class. **Unfortunately, I have to admit there have been many times I myself looked at my watch and 'thank God' when the bell rang**. (Flora, Int. 2)	Positioning (planning and actions, accomplishment and frustrations)	Generalisation Articulation of teacher's voice

In episode 1, in Table 5.31 above, the relationship between the constructs of teacher cognition and interaction is subtle, but can be identified throughout.

Flora does not use the term *interaction* when she describes the purpose of her class (e.g., *fun moment*, *meet people*, and so on), but interactivity seems to be part of her purpose (students *meet people* and cooperate with peers). Also, there is evidence of Flora's role as a teacher (to make sure learners have fun and provide students with cooperative moments). Finally, the analysis suggests that her position in relation to interaction and language acquisition relates to the learning process being disguised with fun activities.

The same subtle relationship between the constructs exists in the other episodes. In episode 2, for example, same extracts were considered for more than one construct (e.g., beliefs, knowledge and decision-making or thought and knowledge). In episode 3, which is mostly about teacher's beliefs, the associations are mainly with knowledge, but also happen in relation to beliefs and decision-making, and thought and knowledge.

Columns from A to D show the development of the analysis. Flora articulates teacher cognition of classroom interaction by offering a straightforward and well-structured narrative which reflects her decades of experience in the EFL classroom. During the production of her data, she opened herself up to the researcher-as-listener and talked about an array of teaching topics, methods, problems and solutions. She also admitted her preference for certain groups of students (e.g., she enjoys teaching kids, not teenagers), her love of her students, and her dedication to the profession.

Flora's articulation of knowledge, thought, beliefs and decision-making and the strategies she chooses to tell her story are evidence of her experience in the field. The dramatic tone she brings to her episodes is similar to

Eduardo's, with some exaggeration mainly through the use of adjectives and adverbs and some repetition (*more and more*, *desperate*, etc.). The analysis shows that Flora also explores interaction in two different ways. First, she refers to effective interaction as all the moments when students are together in class (not only as a classroom activity). Then, she refers to problems she occasionally undergoes when trying to achieve such effective interaction. This suggests that in either case (whether or not effective) Flora tries to provide students with meaningful interactive moments to achieve her teaching goals.

The analysis suggests that Flora's use of adjectives and adverbs bring a dramatic tone to her narratives. The analysis also suggests that Flora is a caring teacher who loves her students and that her experience gives her the self-confidence to discuss the problems which come up in her classroom. The analysis shows that she seems to be well informed of the target language and of her professional responsibilities, and from such knowledge she builds her beliefs, thoughts and decisions.

5.6 Participant 4: Leonor

5.6.1 Leonor: background information and the data produced

Leonor is the participant with the shortest time in the profession, six years at the time of the fieldwork. She delivered succinct but strong statements about EFL practice. She seems to be motivated by her *love* for her students as she mentions in Interview 1. From her narrative it is also possible to sense that

she has been engaged in improving her long-time practice and her language skills.

Her initial education was not in the EFL field, but as soon as she started to teach English as a foreign language, she immersed herself in the profession and began her studies in the area. Thus, she holds an MA in a language teaching related field and participates in workshops and local conferences on the theme as much as possible. Because of her language competence, she is able to teach all the levels (from beginner to advanced) and participate in special courses and projects developed in the PEC.

Leonor chose to produce her data (spoken and written) in English and participated in all the stages of the fieldwork (see Table 5.32 below). She opted to write her narratives and was direct and brief in her interviews. Table 5.32 below displays all the data produced by Leonor in number of words and the focus of each area of data.

Table 5.32 Information about the data generated by Leonor

Participant 4: LEONOR					
Researchable Actions (RA)		N. of words	Mode	Lang.	Main focus / notes
0	**1ST contact**	✓	S	L2	1st meeting with teacher at the PEC, talking about procedures and paperwork.
1	**Interview 1**	1,012	S	L2	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	**Narrative 1**	961	W	L2	Focus on teacher's experience and specific interactive activity in the classroom.
3	**Interview 2**	1,379	S	L2	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	**Narrative 2**	740	S	L2	Focus on teacher's experience, responding to *teacher Maria prompt*, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
5	**Interview 3**	2,459	S	L2	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students. Referring back to Interview 2 and Focus group discussions.
Total		6,551			
6	**Focus group discussions**	19,200*	S	L2	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the PEC after two sets of group discussions.					
Key: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

As noted in Table 5.32, the data produced by Leonor – though not high in number of words – were very impressive in quality of information. She offered a rich and inspiring material for the analysis. Below is the analysis of Leonor's production.

5.6.2 Leonor's articulation of knowledge

Leonor's articulation of knowledge of EFL teaching is evident in her data. The episode from Interview 1 below is a good example of that. It refers to moments in her practice which triggered deeper reflection.

> This happens all the time. I believe since we... I try to tailor my teaching to my students, you know. If I have teenagers I'll try to be using an approach which reaches them rather them use an approach I'd rather use for adults which they seem to interact better, you know, when I use that particular approach. So I really try to tailor my classes, since classroom interaction... it surrounds human interaction, so... and humans are not predictable at all, and so my classroom techniques they vary and I try not to be predictable as a teacher, too. So I try to have that flexibility to change and as a matter of fact I change all the time. There are so many things in the classroom and students' comments make me change my approach so many times. Countless times I'd probably say. (Leonor, Int. 1)

The underlined utterances above show the several moments knowledge is evident in the teachers' actions such as *tailor my teaching to students*, *an approach which reaches them*, *my classroom techniques vary*, among others. These three examples suggest that Leonor seems to be engaged in her teaching and aware of her students' needs. Table 5.33 below offers the interpretation of knowledge and its relationship to interaction, according to Leonor's articulation.

Table 5.33 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
I try to **tailor my teaching** to my students, you know. If I have teenagers I'll try to be **using an approach** which **reaches** them rather them use an approach I'd rather use for adults which they **seem to interact better**	use of metalanguage, academic language and actions directed to specific age groups to provide better interaction (tailor, approach, reach, interact)	exemplifying actions which lead to better interaction
classroom interaction... it surrounds **human interaction**, so... and humans are **not predictable** at all, and so my **classroom techniques** they **vary** and I try not to be predictable as a teacher, too.	relations between human and classroom interaction, need to vary techniques (unpredictability)	defining features of interaction, positioning towards the unpredictable characteristic of human interaction which influence classroom interaction
So I try to have that **flexibility to change** and as a matter of fact I change all the time. There are so many things in the classroom and **students' comments** make me change my **approach** so many times.	need to be flexible and change when necessary, listen to students to create changes in approach	positioning towards changes in interaction

The examples above show the personal practical knowledge present in Leonor's story. She positions herself towards what she considers to be the starting point of classroom interaction (e.g., *human interaction*), and as part of human interaction. Her narrative also suggests that teachers need to adapt interaction (*not to be predictable*) to students' needs. Leonor is quite philosophical in this sense because she looks for reasons which go beyond the academic and professional life to explain her continuous need for change (*countless times, I'd probably say*). Table 5.34 shows the discursive strategies used by Leonor.

Table 5.34 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Generalisation	This **happens** all the time. I **try** to tailor my teaching it **surrounds** human interaction **change** all the time
Evaluation	they seem to interact **better** So I **really** try to tailor my classes humans are not predictable **at all** There are **so many** things in the classroom **Countless times** I'd probably say
Shared knowledge	tailor my teaching to my students, **you know** they seem to interact better, **you know**
Uncertainty	Countless times **I'd probably** say
Articulation of teacher's or students' voices	No apparent occurrences in this episode.

Leonor's episode offers several examples of evaluation which stresses the interesting nature of her story. Leonor does not articulate the teacher or students' voices in this episode and the analysis demonstrates that it is part of her style. Different from the previous participants, she does not bring the classroom experience to the present as if the action was taking place at the moment she narrates her actions in simple ways.

As noted in this episode, knowledge is not analysed as a completely separate construct because it usually occurs embedded in other constructs.

For example, in this episode what was considered evidence of knowledge shows a close relationship to thought, beliefs, and decision-making.

Although Leonor shows a more straightforward attitude than the previous participants, in her articulation of knowledge, there is an emerging interrelation between knowledge and the other constructs. She uses direct ways to express herself and from the episode it is possible to observe evidence of the construct knowledge, especially in the use of metalanguage (technical language – see Section 2.2.2) and of the philosophical positioning.

5.6.3 Leonor's articulation of thought

The episode below is analysed in relation to thought which, as mentioned before, usually relates to other constructs such as beliefs and knowledge. In this episode, Leonor describes a moment when she had to think about her possible *unrealistic expectations* in relation to students' production.

> This particular experience made me stop to think that I may have unrealistic expectations of what students can produce in one class and re-evaluate the tasks I set to students. The textbook and the schedule I have to follow demand that I cover a topic within a set amount of time but the learner has their own time to process information before they are able to develop a new skill. This may be one of the tensions in teaching and learning a foreign language. What I ultimately learned from this experience is that just because a topic has been taught and the student seemed to have been sufficiently exposed to it, it does not mean that it has automatically been learned.
> (Leonor, Narr. 1)

The episode is analysed as an extended thinking episode. Leonor assesses the *textbook and schedule* she needs to use and which do not always suit the students' needs and abilities. She says she learned a lesson from her experience, which suggests she is going to change both her expectations and her actions to reach students' learning goals.

Table 5.35 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
This particular experience made me stop to think that I may have unrealistic expectations of what students can produce in one class and re-evaluate the tasks I set to students.	expectations do not fit the students' reality	positioning towards students' ability to produce in the target language
The textbook and the schedule I have to follow demand that I cover a topic within a set amount of time but the learner has their own time to process information before they are able to develop a new skill. This may be one of the tensions in teaching and learning a foreign language.	professional tensions lived by teachers to fit the planning to students ability to learn	positioning in relation to mandatory planning and in-classroom decisions during students' production and interaction
What I ultimately learned from this experience is that just because a topic has been taught and the student seemed to have been sufficiently exposed to it, it does not mean that it has automatically been learned.	lesson learned	exemplifying a lesson she learned as a professional engaged to her practice

Table 5.35 above shows the connections made between thoughts and interaction. Although Leonor did not directly write the term *classroom interaction* in her narrative, it is suggested by her reference to students' production and learning. Interaction in this episode is mainly connected to thought concerning her position to her professional duties and the results she sees in her students' noticeable understandings and demonstrated skills. As can be seen in Table 5.36, Leonor uses several discursive strategies in this episode.

Table 5.36 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	The textbook and the schedule I **have** to follow **demand** that I cover a topic within a set amount of time. This **may be** one of the tensions in teaching and learning a foreign language.
Evaluation	What I **ultimately** learned the student seemed to have been **sufficiently** exposed to it
Uncertainty	that I **may have** unrealistic expectations This **may be one** of the tensions in teaching
Shared knowledge	No apparent occurrences in this episode.
Articulation of teacher and students' voices	No apparent occurrences in this episode.

Leonor shows that her direct way of articulating her thoughts and telling her story reflects her concerns for teaching and her students. Leonor brings a formal tone to the narrative, in contrast to the other three participants analysed so far.

5.6.4 Leonor's articulation of beliefs

Leonor's articulation of beliefs is represented by the long episode below. Her spoken narrative responds to questions about her students, interaction, and the roles of L1 in the classroom. It also brings back a subject broached by Lidia in her narrative: the idea of a teacher *persona* (see Section 5.4.1).

> I teach many age groups and **I think** the younger... the youngest student I have right now, might... probably be about eight or nine, and the oldest is probably over fifty and what is my relationship like with them? Well, **I believe** that teachers have some sort of persona when they teach, when they are in this classroom environment which may be different from who they are most of time outside the classroom, and this persona that **I believe** that I have... well, many times I find myself making students laugh as well... which bring them back to a more serious teaching time, so when we're going some grammar points, vocabulary and other things as well.
>
> Everything that goes on between... among students, between students... students and teacher. Whether they are activities specifically set by the teacher for the students to interact or things that are not structured at all, like, normal conversations within the classroom in a foreign language. **I believe** that counts as interaction as well. For lower levels, **I believe** using the mother tongue at times is also classroom interaction as the mother tongue is used to explain procedures that the students may not understand otherwise... you know... I mean, in English itself. And so, **I believe** classroom interaction takes whenever any... whenever there is an... there is a... an exchange between people, whether it's in English, or in the mother tongue. (Leonor, Int. 1)

The episode above is an example of Leonor's articulation of beliefs in relation to classroom interaction. However, the analysis shows that the episode also shows the interrelation between all four constructs of teacher cognition. For example, throughout the episode (see in bold cases of ***I believe*** and ***I think***), the verbs *believe* and *think* interchange their roles by representing both

beliefs and *thought*. In addition, the utterances which start with these verbs (believe and think) are as well embedded in personal practical knowledge (e.g., ages of students, teacher personas, interaction, L2, and so on) and in decision-making (e.g., make students laugh to understand a topic better). The relationship to interaction is demonstrated in Table 5.37 below.

Table 5.37 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
Well, I believe that teachers have some sort of **persona** when they teach, when they are in this classroom environment which may be different from who they are most of time outside the classroom, and this **persona** that I believe that I have... well, **many times I find myself making students laugh** as well	teachers have personas and sometimes her teacher persona is fun	positioning towards teacher's roles
Everything that goes on between... among **students**, between students... students and teacher. Whether they are **activities** specifically set by the teacher for the students to interact or things that are not structured at all, like, normal conversations within the classroom in a foreign language. I believe that **counts as interaction** as well	all activities in which students take part can be considered as interaction	positioning towards students' learning and interaction defining what counts as interaction
I believe using the **mother tongue** at times is **also classroom interaction** as the mother tongue is used to explain procedures that the students may not understand otherwise	classroom interaction also happens in the mother tongue	positioning towards the roles of mother tongue in interaction defining interaction
I believe **classroom interaction** takes whenever any... whenever there is an... there is a... an **exchange** between people, whether it's in English, or in the **mother tongue**.		

The analysis also shows that Leonor's position in relation to interaction occurs in several ways. First, she talks about teachers' roles and the *personas* teachers adopt for particular classroom environments. Then she explains the roles of L1 in the classroom and that interaction also happens in the mother tongue. Finally, Leonor talks about what counts as interaction in her practice (e.g., *everything that goes on between students*, *normal conversations*, *using the mother tongue*, and *an exchange between people*). All these ideas are closely related to effectiveness and quality of teaching. Table 5.38 offers some examples of the strategies used by Leonor.

Table 5.38 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	teachers have some sort of persona Everything that goes on between... among students (…)counts as interaction as well classroom interaction takes whenever (…) there is an (…) exchange between people
Evaluation	which bring them back to a more serious teaching time many times I find myself making students laugh as well
Uncertainty	the youngest student I have right now, might... probably be about eight or nine, the oldest is probably over fifty
Articulation of teacher and students' voice	No apparent occurrences in this episode.
Shared knowledge	No apparent occurrences in this episode.

One assumption that can be made from Leonor's articulation of beliefs relates to the interrelation between the four constructs of teacher cognition. As shown in the analysis, in the episodes the constructs are intertwined generating multiple understandings. Another assumption refers to the idea of teachers' personas which occurs in her articulation of beliefs. The notion of *teacher personas* suggests that there can be various interpretations of teaching and of interaction in which the *personas* act.

5.6.5 Leonor's articulation of decision-making

There is evidence of decision-making in Leonor's episode below. She was asked about a comment she made in a previous narrative regarding the balance she needed to find to work with fast and slow students and its impact on interaction.

> That's a very difficult balance to have and I don't think I have reached that level, where I think, 'OK, I'm balanced in this sense'. I noticed that in myself I'm a very… I may have been a faster learner. And this influences my teaching very much… I see students fidgeting while doing the activity I'll instantly think, 'OK, this student must have finished'. And then I see 2, 3, 5, 6… and then I try to move on or do something else. And then I recognize but looking back… I may be speeding things up because of this… of these students. It may not be the best thing to do. Maybe leaving there the way they are… to fidget as much as they want to do… and looking after the other students… may be a better thing to do. …It's not easy. I suppose you just feel… feel the time… what's the best thing to do in this particular situation. You know if I have a lot of… students and students that are always behind… then I'll have to make that. I try to balance that pace more… a lot more. And if I have students that are

quicker, I'll definitely go with them than with the… a little bit slower. (Leonor, Int. 2)

Leonor's decisions are mainly related to finding the balance between her own pace and the students'. She believes she needs to work hard in order to reach the appropriate balance and her final decision is to keep the pace learning according to the faster students' needs. Table 5.39 shows the relationships between decision-making and interaction.

Table 5.39 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
That's a very **difficult balance to have** and I don't think I have reached that level	to reach an acceptable balance in the timing of a lesson	positioning towards a problem – balance in the pace of the lesson
I may have been a **faster** learner. And this **influences** my **teaching** very much	to understand how her attitudes influence her teaching and consequently student learning	acknowledging that her own learning style influences her teaching
I see **students fidgeting** while doing the activity…and then I **try to move on** or do something else	to talk to continue the activities based on her monitoring	identifying the moment to move on to other interactive activities
may be **speeding** things up because of this… of these students. It **may not be the best thing to do**. Maybe leaving there the way they are… to fidget as much as they want to do… and **looking after the other students**… may be a better thing to do.	to pace her lesson according to students' needs	positioning towards the best actions to take to keep an acceptable pace
I suppose you just feel… **feel the time**… what's the best thing to do in this particular situation	to trust her teacher's feelings to find the best action	acknowledging that teacher's feelings influence decisions regarding interaction
I'll have to make that. I try to balance that **pace** more… a lot more. And if I have students that are **quicker**, I'll definitely go with them than with the … a little bit slower.	to keep the pace of the faster students	positioning towards the best pace to develop interaction

The analysis suggests that the pace of activities in the lesson described relates to the time allowed for students to interact with each other. Leonor understands that when students begin *fidgeting* it means that they are ready to move on. Her main professional conflict in this case is whom to benefit – the students who have a faster pace or the ones who have a slower pace.

Leonor chooses the former because, as a faster learner herself, and from her experience, she understands that going too slowly might result in disruptive students. Table 5.40 below shows which strategies occur in Leonor's articulation of decision-making.

Table 5.40 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Generalisation	**That's** a very difficult balance to have this **influences** my teaching very much **It's** not easy.
Evaluation	That's a **very difficult** balance It may not be **the best** thing to do what's **the best** thing to do I try to balance that pace **more… a lot more** I'll **definitely** go with them
Articulation of teacher's voice	…where I think, '**OK, I'm balanced in this sense**'. I'll instantly think, '**OK, this student must have finished**'.
Shared knowledge	I suppose **you** just feel **You know**, if I have a lot of… students
Uncertainty	I **may** have been a faster learner It **may** not be the best thing to do **Maybe** leaving there the way they are You know, **if** I have a lot of… students
Articulation of students' voices	No apparent occurrences in this episode.

Different from her previous episodes, Leonor articulates her voice which occurs as thoughts in the first person as if she was thinking them at the moment the lesson happened. Leonor also shared knowledge with the researcher-as-listener in the use of the impersonal *you* and the marker *you know*.

Decision-making, as analysed in this episode, occurs based on a combination of constructs. It is grounded in knowledge, beliefs and thought and closely interrelated to these constructs throughout the text. Leonor's decisions are also based on her balanced reflections and her experience. Her professional attitude can be noted in her concern for her students' development.

5.6.6 Discussion of Leonor's data analysis

In Leonor's production, the four constructs of teacher cognition appear to have the same interrelation as seen in the analysis of previous participants. Such interconnections generated multiple coding which can be observed in Table 5.41. The table offers an inclusive analysis of Leonor's articulation of teacher cognition, also considering the focus on interaction and the discursive strategies.

Table 5.41 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. Over the years I have noticed that people and even teenagers learn at different speeds and that I need to find a balance between going the extra mile to help those who fall behind and at the same time continue progressing with the students who can keep up. **I can never favour any one of these two groups of students in my teaching and run the risk of losing the other**. I must admit that IT IS OFTEN A VERY DIFFICULT BALANCE TO FIND. (Leonor, Narr. 1)	Exemplifying (lesson pace meets students' needs) Positioning (teacher's role to manage the rhythm of the class)	Generalisation (rhythm) Evaluation (extra mile, never, very difficult)
	2. There are some classes they work very well in English. And they don't need the mother tongue unless they really need vocabulary and they say 'ok, how do you say this? How do you say that?' **They did try to use English for this**, but THERE ARE SOME OTHERS WHERE STUDENTS DON'T SEEM TO WORK IN ENGLISH, YOU KNOW? SPEAK ENGLISH THE WHOLE TIME... SO THEY NEED TO BE CHECKING WITH EACH OTHER IN PORTUGUESE. And then WHEN THEY ARE SURE THEY GOT WHAT THEY NEED TO DO, THEY WOULD SWITCH BACK TO ENGLISH. AND THEN DO WHAT THEY NEED TO DO. (Leonor, Int. 2)	Exemplifying (moments students use L1/L2) Positioning (L1/L2)	Generalisation (use of L2) Evaluation (did try) Shared knowledge (you know) Articulation of students' voices
	3. I recorded an activity I set for a teenager beginners group. The topic was learning to ask about people's favourite things such as bands, singers, actors, colour, etc. First, I went over the basic vocabulary of the lesson, then grammar and finally the pronunciation of words. As a speaking task, I showed students a table with names of two people and the pictures of their favourite book, movie and actor. Students had to look at the table and take turns asking and answering questions about the people in the chart. (Leonor, Narr. 1)	Exemplifying (interactive activity)	Description of an activity

In episode 3 (see Table 5.41), for example, Leonor is straightforward in her narrative as she describes the interactive activities in an organised way. None of the emerging strategies found in other episodes (see the previous sections of Leonor's data analysis) are apparent in episode 3 (Table 5.41). She does not articulate either the teacher or students' voices, make evaluations, display any uncertainty, neither does she share knowledge with the researcher-as-listener.

The analysis suggests that Leonor articulates teacher cognition by using a formal voice which echoes in her narratives. It also seems that she is constantly focused on her professional attitude, in the improvement of her practice and consequently, in the best development plan for her students. The analysis also shows Leonor's serious attitude when talking about her professional life. This is also observed when she mentioned she was able to make her students laugh to have them focus on an important topic (*well, many times I find myself making students laugh as well* – see Section 5.6.4).

The main variation found during the analysis relates to the participants' styles of storytelling, in writing or speaking. In brief, styles of storytelling refers to the ways teachers choose to express themselves whilst telling or writing their stories (Section 7.4 discusses this topic in detail). Leonor's seriousness in her articulation of teacher cognition seems to be more formal in the written narrative than in the spoken. Although her stories are brief (in both spoken and written modalities), the language Leonor uses appears to be more carefully thought-out in the written narratives than in the spoken. Leonor's reticent articulation can be considered as a choice not to be informal in her

stories. As a consequence, she does not articulate teacher or students' voices as much as the other participants (see for example Eduardo and Flora) and offers an orderly account of her practice.

5.7 Participant 5: Marco

5.7.1 Marco: background information and the data produced

Marco is an experienced teacher who seems to be quiet, but he was open to talk about his practice. He has been teaching EFL for about sixteen years and had been working at the PEC for about four, at the time of fieldwork. His participation is valuable for both his time in EFL teaching and his professionalism.

As seen in other participants' background information (such as Lidia and Leonor), Marco's initial education was not in the EFL field, but when he started teaching English and enjoying the profession, he decided to attend a specialisation course in TEFL and have a formal education in the area. Similarly to Leonor, he also gives a straightforward tone to his narratives. His production shows that Marco is constantly concerned about his students' development. His narratives show that he often offers reflections about his teaching experience as a means to improve his practice. He also seems to be knowledgeable of his professional duties and is interested in encouraging students' improvements in the classroom.

Marco chose to use his mother tongue (Portuguese) in most of his spoken production, but he used English in his written narratives. During the fieldwork,

as mentioned previously, teachers were told they could use either or both languages (Portuguese or English) in the interviews and narratives because the main objective was to make them feel comfortable and not overwhelmed during the research process. Thus, the analysis shows that the language choice in teachers' narratives occurs naturally and in fact seems to be the result of how they feel relaxed and not pressured by the moment (refer to Section 5.3.1). Marco, for example, has a high level of English proficiency and used both languages to articulate his stories at any moment when he wished.

Table 5.42 shows that Marco articulates in both Portuguese and English. During Interview 2, for instance, (marked L1/L2 in the language column) one of the questions was delivered in English and his answer naturally followed the codeswitching of the interviewer. This switch can be seen as part of the process of the co-construction of data and not a problem of losing or gaining voice in the second language as suggested in Bakhtin's ideas of agency (e.g., Hall, Vitanova, & Marchenkova, 2005).

Table 5.42 Information about the data generated by Marco

Participant 5: MARCO					
Researchable Actions (RA)		N. of words	Mode	Lang.	Main focus / notes
0	1ST contact	✓	S	L1	1st meeting with teacher at the PEC, talking about procedures and paperwork.
1	Interview 1	3,041	S	L1	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	Narrative 1	1,130	W	L2	Focus on teacher's experience and specific interactive activity in the classroom.
3	Interview 2	1,891	S	L1/L2	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	Narrative 2	675	W	L2	Focus on teacher's experience, responding to *teacher Maria prompt*, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
5	Interview 3	3,151	S	L1	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students.
Total		9,888			
6	Focus group discussions	19,200*	S	L2	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.

Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever he feels appropriate.

* Total number of words produced in the PEC after two sets of group discussions.

Key: **Int.**= interview **Narr.**= narrative **S**= spoken mode **W**= written mode;
Lang.= language used by participant **L1**= Portuguese **L2**= English

As seen in Table 5.42, Marco participated in all of the stages of the research. During the fieldwork, he seemed to be comfortable with the research process and talking about his practice. The next sections show the analysis of Marco's production.

5.7.2 Marco's articulation of knowledge

As Eduardo and Lidia, Marco showed he is knowledgeable of EFL teaching in several ways. For example, he makes use of academic and professional terminology in his stories. The episode from Interview 1, below, is an

example of Marco's articulation of knowledge. When asked about the importance of classroom interaction and its impact in his practice, he said,

> I think it [classroom interaction] is very important, especially because for many people, there is the question of the classroom where one comes to learn the language. I think any language. Provided it is presented to the student. He needs to have a notion that he will interact with other people outside the classroom and that if he does not start doing it inside the classroom, several of these abilities, these aspects…especially… the spoken part will be damaged. So, there are students who are very shy. They even reject to work in groups. For example, I have an interesting group of students this semester. And it happened that they did not want to mix with another group because they did not know them. Even when I make interactive activities, they do it, but I feel that it is because they are obliged to do it, then they go back to their places, they do not stay. You understand? So, not to waste time and not to make the lesson a forced situation, then I ask them to do it and let them go back to their places. However, I have already talked with them at length. This same thing we are talking here – that it is important to have interaction with other people, that they need to listen to other people, talk to other people. In the end, it seems that they forget everything and resist to that. Not all of them, but in this specific group I now have, for example, most of them resist. But I think that interaction is very important. I think that the teacher has to keep insisting on that, to keep making it happen, because it is the best way for the student. (Marco, Int. 3)

Original version: Eu acho muito importante, principalmente porque pra muitos há a questão da sala de aula na qual se vem aprender o idioma... acho que qualquer idioma. Contanto que seja trabalhado isso na cabeça do aluno. Ele deve ter noção que ele vai interagir com outras pessoas fora de sala de aula, e que se ele não começar a fazer isso em sala de aula, várias dessas habilidades, vários desses aspectos... principalmente.. a parte oral vai ficar defeituosa. Então tem alunos que são muito tímidos. Eles tem aquela rejeição mesmo de trabalhar em grupo. Inclusive eu tenho um grupo de alunos interessante nesse semestre. E aconteceu de eles não quererem se misturar com uma outra turma porque eles não conheciam, tinham pegado antipatia por alguns e é muito difícil de trabalhar com eles. Por mais que eu faça atividades de interação, eles fazem, mas eu sinto que é muito por obrigação, depois eles voltam pro lugar deles. Eles não ficam. Entendeu? Então por uma questão de não perder tempo, de não fazer a aula ficar forçada, então eu peço pra eles fazerem...permito que eles voltem pro lugar... pro lugar. Mas eu já conversei muito com eles sobre isso, essa mesma coisa que a gente tá falando de... de... é importante que haja interação com outras pessoas e eles tem que ouvir outras pessoas, falar com outras pessoas. No final parece que eles esquecem tudo, resistem àquilo... Não são todos, mas essa turma específica que eu peguei, resiste a maioria, por exemplo. Mas eu acho a interação muito importante. Eu acho que o professor tem que continuar insistindo nisso, continuar fazendo com que aconteça, porque é a melhor forma pro aluno. (Marco, Int. 3)

In this episode, Marco shows he understands the importance of classroom interaction in the development of his students. He is aware that practice is necessary to improve the abilities in a new language. In addition, he gives an example of a group which had problems interacting with each other, but he also shows the decisions he made to keep interaction alive in his classroom. Table 5.43 shows how Marco's articulation of knowledge relates to the concept of interaction.

Table 5.43 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
I think it [classroom interaction] is **very important**, especially because for many people, there is the question of the classroom where one comes to **learn** the language.	interaction is needed to reach better learning	exemplifying actions which lead to better interaction advising students about appropriate actions to reach learning
He needs to **have a notion that he will interact with other people** outside the classroom	Interaction represents a training to real-life situation	Positioning towards purpose of interaction
So, not to waste time and **not to make the lesson a forced situation**, then I ask them to do it and let them go back to their places. (…) **it is important to have interaction with other people, that they need to listen to other people, talk to other people.**	monitoring the class and giving student appropriate support	defining and positioning towards the importance of interaction convincing students to perform interaction
But I think that interaction is very important. I think that **the teacher has to keep insisting on that, to keep making it happen, because it is the best way for the student**.	teacher's job is to keep students' learning	

The analysis shows that in the episode above Marco discusses the importance of interaction in students' development in language learning. He also mentions the role teachers have in facilitating and guiding students in their studies. Marco seems to understand that there are different settings where classroom interaction can take place (inside and outside the classroom). Thus, he motivates his students to interact with their peers because he understands interaction takes place in their everyday life. Table 5.44 shows the discursive strategies which occur in Marco's articulation of knowledge.

Table 5.44 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Generalisation	**It is** very important. it **seems** that they **forget** everything and **resist** to that the teacher **has to keep** insisting on that, **to keep** making it happen
Evaluation	It is **very** important. it is **important** to have interaction because it is the **best** way for the student.
Shared knowledge	**You understand**?
Uncertainty	No apparent occurrences in this episode.
Articulation of teacher's or students' voices	No apparent occurrences in this episode.

Table 5.44 above shows that instead of using the marker 'you know', Marco shares knowledge asking the researcher-as-listener [do] *you understand?* There are no occurrences of uncertainty or articulation of teacher and students' voices in this episode.

The articulation of knowledge is the most subtle in the analysis because knowledge is the basis of teachers' understandings of any teaching topic discussed. In the case of Marco's episodes, this is also true. Thus, in the articulation of the other constructs of teacher cognition, knowledge can become evident or implicit in teachers' narratives.

5.7.3 Marco's articulation of thought

The episode below is analysed in relation to articulation of thought. Marco was asked how he created interactive activities in his practice.

> Most of the time I try to make them interact, but depending on the classes... there is some kind of resistance from them. It's hard to make them... sometimes I think I waste my time doing that because I have other things to do so I move on. But when I have time and I can do this more often, I do, for example, using the white board or the Mimio*. For example, last class, you know, I have this intermediate level group, like 20 students, and I have couples here [in the same classroom the interview happened], I have [students who are] boyfriends and girlfriends and they like to sit next to each other and try to force them a little [so that students work with other peers]. So I use these games, like I write their names on the board, and then I ask other people to come and try... 'OK, can you match two of these names?' and they go and they match (...) the first pair we have today. 'So you have to obey what your partner matched here.' And they (...) I try to do it in a fun way so they enjoy it. But the next class they go back to the previous partner. And that is something that I try to do, I try to let them know why this is important, although there is some resistance, but I think if they know why it's important, maybe they feel more open to this. And I do these little games that I can make them talk... (Marco, Int. 2)

* [Mimio is the brand of an interactive smart board system]

In this episode, Marco reflects on the impact of interaction in his classroom. He gives an example of one type of pairing technique he uses in his practice. The idea of thought which emerges from the narrative is subtle, but the

underlined utterances can be considered as extracts of thought in Marco's articulation. Table 5.45 shows the details of the analysis and the relationships between thought and interaction.

Table 5.45 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
Most of the time I **try to make them interact**, but depending on the classes... there is some kind of **resistance** for them. (…) sometimes I think I **waste my time** doing that because I have other things to do **so I move on**	the resistance students have to interact sometimes and in-class decisions	positioning in relation to students' resistance and making decisions
But when I have **time** and I can do this more often, I do, for example, using the **white board or the Mimio**.	Teacher creates interaction from different techniques and sources	Exemplifying the sources available to provide interaction
I have (…) **boyfriends and girlfriends** and they like to sit next to each other and try to force them a little [so that students work with other peers]. So I use these **games**,	The relationships between students can affect interaction	exemplifying a technique (games) to generate variation in pairing

From the analysis, it seems, Marco has to think about all the factors which influence his teaching. For example, he needs to face the *resistance* from students who do not want to be separated from their partners and he needs to be creative to *force* students to rotate in the pairing during interaction. Note that his thoughts about this particular lesson and group are closely related to his personal practical knowledge (to have different techniques to overcome the resistance) and to decision-making, because when he meets resistance he needs to create new ways to make the students interact.

Marco does not offer a definition or description of an interactive activity. However, he brings an explanation of when and what he needs to do to keep students interacting with as many peers as possible, as well as the problems he has faced to keep following his lesson plan. Table 5.46 shows the strategies used in Marco's episode.

Table 5.46 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	Most of the time **I try to make** them interact
Uncertainty	but **depending on the classes**... there is some kind of resistance from them
Articulation of teacher's voice	OK, **can you match** two of these names? So **you have to** obey what your partner matched here.
Shared knowledge	For example, last class, **you know**,
Evaluation	No apparent occurrences in this episode.
Articulation of students' voices	No apparent occurrences in this episode.

As noted in the previous section, Marco's articulation is usually straightforward. He does not offer exaggerations or emotional terms as seen in Eduardo and Flora's production. He tells his story, illustrates it with examples, and moves on. In this episode, Marco articulates the teacher's voice, showing what he said to the students and bringing the story to the present.

As seen in other participants' articulation of thought, there is an interrelation of the constructs (especially with beliefs and knowledge). In Marco's articulation of thought his *teacher persona* (as suggested in Lidia and Leonor's data) seems to be focused on student learning through interaction. Similar to Leonor, Marco has a direct way of expressing his thoughts in narrative.

5.7.4 Marco's articulation of beliefs

As previously established, beliefs are usually represented in close connection with the other three constructs explored in the current study. Marco's articulation of beliefs is here represented in the episode below. He was asked about the meaning of classroom interaction and the use of the mother-tongue during interaction in his classroom.

> Well, I see [classroom interaction] as a need that the teacher has to communicate with the student – the student with the teacher and with other peers as well. I believe that the teacher works there as a…let's say…a guide, a facilitator. So that the student is able to use the language he is learning with the other peers in a way that it flows well. (…) Look, I particularly think, depending on the level which we are teaching, I think interaction in Portuguese cannot be very good. For example, in more advanced levels, there is no need for this interaction to happen in Portuguese, then it can happen in English. But, for example, in a basic level there are students who are not shy and will not keep quiet all the time, even in their language. So, if they try to interact with other students, this social question…I think this [using the mother tongue] will help when they are already engaging in learning the language and practicing the language which they are studying. (Marco, Int. 1)

> Original version: Bom, eu vejo [classroom interaction] como a necessidade que existe do professor comunicar-se com aluno, do aluno com o professor e com outros colegas também. Eu vejo que o professor alí vai funcionar, digamos assim, como um guia, um meio. Que o aluno consiga usar o idioma que ele tá estudando com os outros colegas de uma forma que a coisa flua bem. (...) Olha só, particularmente, eu acho que dependendo do nível em que nós estamos dando aula, eu acho que a interação em português pode não ser muito boa. Por exemplo, em níveis mais avançados, não tem necessidade dessa interação acontecer em português, então já pode acontecer em inglês. Mas, por exemplo, no nível básico existem alunos alí, que eles não são tímidos, eles não vão ficar calados o tempo todo, mesmo no idioma deles. Então, se eles tentam interagir com outros alunos, essa questão social... eu acho que vai ajudar quando ele já tiver engajando na aprendizagem do idioma e colocando em prática o idioma que ele tá estudando.(Marco, Int. 1)

Marco interprets classroom interaction as *a need* which relates to communication in the classroom. However, he does not see the use of mother tongue as benefitting the students. He understands that there is a *social question* and that students want to keep connected with the peers, but Marco believes that interacting in L1 in the classroom is not the best option for students' learning and development. Table 5.47 shows the relations between interaction and beliefs as articulated by Marco.

Table 5.47 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
Well, I see [classroom interaction] as **a need that the teacher has to communicate** with the student – the student with the teacher and with other peers as well.	teachers use interaction to have students communicating	positioning towards and defining interaction
I believe that the teacher works there as a…let's say…a guide, a facilitator. So that the student is able to **use the language** he is **learning** with the other peers in a way that it flows well.	teachers are facilitators in the learning process of interaction	positioning towards teacher's roles in interaction
I think interaction in Portuguese cannot be very good. (…) for example, in **a basic level** there are students who are not shy and will not keep quiet all the time, even in their language. So, if they **try to interact with other students**, this social question…I think this [using the mother tongue] will help…	the target language is the best language for interaction	positioning towards L1/L2 exemplifying the use of L1

Marco mainly positions himself according to the teacher's roles and students' attitudes during interaction. He understands that according to their level, students will be prone to speaking the mother tongue instead of the target language when they want to communicate freely. However, his main belief, as we can note, is that in the classroom English should be the language spoken – by the teacher and by students, regardless of level. Clearly, he understands that beginner students have their limitations, but it is implicit in his narrative that it is the role of the teacher to find the appropriate boundary between the target and native language. Following, Table 5.48 offers some examples of the discursive strategies used by Marco in his stories.

Table 5.48 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	I **see** [classroom interaction] as a need that the teacher **has to communicate** with the student interaction in Portuguese **cannot be** very good
Evaluation	interaction in Portuguese cannot be **very good** I **particularly** think
Uncertainty	No apparent occurrences in this episode.
Articulation of teacher and students' voice	No apparent occurrences in this episode.
Shared knowledge	No apparent occurrences in this episode.

There were two apparent strategies in this episode: generalisation and evaluation. Marco generalises on the definition of classroom interaction and his opinion on the use of the mother tongue. Beliefs are articulated in Marco's episode in a very direct way. Marco's beliefs centre on EFL teaching and the responsibilities a teacher has in the classroom – to guide, facilitate and motivate students to engage in interaction, preferably in the target language.

5.7.5 Marco's articulation of decision-making

In the following episode, Marco talks about an experience he had with a group of beginners. He was asked about situations in which his lesson plan needed to be changed. He explains that because of one student, he needed to change activities every class. The episode shows what decisions he needed to make to persuade this particular student to interact with his peers and benefit from the learning process. The actions described here, show Marco's attitude towards his pupils.

> Well, I will give you an example [of a situation] I had with a beginner student on the Saturday class. So, if I'm not mistaken…yes…it was a beginner group, actually, it was intermediate. And I had [classes] in the afternoon and in the morning. In the afternoon group, I had a student who was very…he had a certain block to learning. He didn't like the language. He didn't like English. He told me that he could speak another language and he had even taught this other language. Then, he didn't like the way I taught, so he didn't…In the case of the morning class, everything flowed very well. So, that [the morning] was the first class. In the afternoon I needed to change some things specifically because of this student, *né*? [Right? Isn't it?] Thus, for example, I saw that there was a person, his friend, to whom he was able to communicate somehow with her help. Then, I tried to use this friend he had in class because they were always together. And I tried to make a different activity for them both because she could already communicate, she had already studied [English] before, but he hadn't…So, he would feel a little bit safer with her. Then the activities that I sometimes gave to the whole class, had a little of a change for them, a little change for him specifically, a little bit easier. Then, just to have an idea…because of one student, sometimes I could not do [an activity] with the whole group. It took a while until he was able to relax. After a while, I noticed it was more of a problem of introversion than any other reason because later he was able to interact a little bit more than before with the group. He was able to produce better and more. (Marco, Int. 1)

Original version: É, eu vou dar um exemplo [de uma situação] que eu tive com um aluno de iniciantes aos sábados. Então, se eu não me engano... é... era nível iniciante, era intermediário...na verdade. E eu tinha à tarde e pela manhã. Na turma da tarde, eu tinha um aluno que era muito assim... ele tinha um certo bloqueio. Ele não gostava do idioma. Ele não gostava de inglês. Ele mesmo falava pra mim que ele falava outro idioma, ele já tinha dado aula de outro idioma. Então ele não gostava muito da forma que eu dava aula, então ele não... No caso da aula da manhã tudo fluía muito bem. Então era a primeira aula. À tarde, eu precisava mudar coisas especificamente por causa desse aluno, né? Então, por exemplo, eu via que tinha uma pessoa, uma amiga dele, que ele conseguia se comunicar de alguma forma com ajuda dela. Então, eu tentava usar essa colega dele, porque sempre eles estavam juntos. E eu tentava fazer sempre uma coisa diferente pra eles dois porque ela já conseguia se comunicar um pouquinho mais, ela já tinha estudado antes, mas ele não... Então ele se sentia um pouquinho mais seguro com ela. Então atividades que às vezes eu passava pra turma toda, eu tinha que mudar um pouquinho pra eles, um pouquinho pra ele especificamente, fazer um pouquinho mais fácil. Então, só pra ter uma ideia de que... por causa de um aluno eu não podia fazer com a turma toda às vezes. Foi um tempo até que ele conseguisse se soltar. Depois de um tempo eu notei que era mais uma questão de timidez do que de outra coisa porque depois que ele conseguiu interagir um pouco mais com a turma. Ele conseguiu produzir um pouco melhor, um pouco mais. (Marco, Int. 1)

The analysis suggests that Marco's decisions mainly related to the problem he needed to solve. He had to adapt his afternoon class to suit one of his students; he *used* another learner to be the student's main partner and little by little he got positive results from his actions. As seen in the analysis, Marco's decisions were made before class (prior or planned decisions) and during the class. He probably also made post-class decisions to evaluate whether his actions had generated positive results (see Section 5.3.6 for details).

Table 5.49 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
I had **a student** who was very…he had a certain **block to learning**. He didn't like the language. He didn't like English.	to solve a problem	positioning towards a problem – a student who does not interact with the others
In the afternoon I needed to **change** some things specifically **because of this student**, *né*?	to make changes to integrate student in the group	making changes to improve interaction
I tried to **use this friend** he had in class because they were always together. And I tried to **make a different activity** for them both because she could already communicate, she had already studied [English] before, but he hadn't…So, he would feel a little bit **safer** with her.	to help student feel safer by making changes and finding a peer-helper	Exemplifying the tools provided for interaction to happen
the **activities** that I sometimes gave to the whole class, had a little of a **change** for them, a little change **for him** specifically, a little bit easier.		
It took **a while** until he was able to relax. After a while, I noticed it was more of a problem of **introversion** than any other reason because later **he was able to interact** a little bit more than before with the group. He was able to **produce** better and more.	to monitor student's' results	showing results of changes

All the decisions made by Marco in this episode related to a specific student. Marco was aware that this student was not able to integrate with the group and began a series of actions to help the learner produce appropriately at his level. The analysis suggests that the teacher's decisions were made based on his knowledge that if he were not pro-active, the student might not learn. Interaction seems to be the beginning (there is a problem – a student does not interact) and the end (student reaches the level of the group) of the narrative. The discursive strategies are shown in Table 5.50 below.

Table 5.50 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Evaluation	feel **a little bit** safer had **a little of** a change **a little** change for him specifically, **a little bit** easier to interact **a little bit** more I noticed it was **more** of a problem of introversion
Shared knowledge	because of this student, ***né***? [right? isn't it?]
Uncertainty	it was a beginner group, actually, it was intermediate.
Generalisation	No apparent occurrences in this episode.
Articulation of teacher and students' voices	No apparent occurrences in this episode.

In this episode, Marcos articulates decision-making in a very straightforward way. There are few occurrences of discursive strategies, but Marco shows he is concerned with student development in the classroom. There is evidence of shared knowledge which is used to include the researcher-as-listener's participation and evaluation in the story. The evidence of uncertainty emerges when the teacher had doubts about the level he was describing. There is no evidence of generalisation, and as shown in the previous sections, Marco does not articulate teacher or students' voices very often.

5.7.6 Discussion of Marco's data analysis

The analysis of Marco's production suggests that he articulates the constructs of teacher cognition in his own fashion. Table 5.51 shows how all the elements generate a thorough understanding of the teacher's articulation.

Table 5.51 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1a. This activity was planned to make students ask and answer about different things they like. I wrote some different topics on slips of paper (sports, movies, food, colour, TV shows, music, hobbies...) and the topics were distributed among students. I asked them to stand up and listen to my instructions and wait until I finished, then they could ask any questions they had. I told them to think about questions they could ask their partner using the topics they had. I elicited from them some examples: 'What questions can you ask about food?' Student 1 asked: 'What do you eat for breakfast?' Then I answered. I NOTICED STUDENTS HAD UNDERSTOOD WHAT TO DO, so I checked if they had any doubt. They said it was ok. I went on explaining that the objective was to remember some interesting information about their partners, so they could report to the class later.	Exemplifying (interactive activity on likes) Describing step by step (teacher's role to manage the class)	Organised description of interactive activity Articulation of teacher and students' voices (elicitation and response)
	1b. MOST STUDENTS WERE ABLE TO COMMUNICATE USING THE TARGET LANGUAGE (WH- QUESTIONS; YES/NO QUESTIONS). As they asked and answered I walked around the class monitoring and helping whenever they had any doubt or needed some vocabulary. **THE QUESTIONS SEEMED TO BE ACCURATE MOST OF THE TIME.** STUDENTS' DOUBTS WERE MORE RELATED TO VOCABULARY RATHER THAN GRAMMAR. **I BELIEVE THEY FELT GOOD ABOUT BEING ABLE TO USE WHAT THEY HAD LEARNED.** When the activity was over I told them to sit down and asked if they'd like to share what they had found out about some of their classmates. THE OUTCOME I EXPECTED HAD BEEN REACHED: THEY HAD BEEN ABLE TO INTERACT AND COMMUNICATE USING THE TARGET LANGUAGE. (Marco, Narr. 1)	Exemplifying (interaction and use of L2) Positioning (students' performance)	Generalisation (students' performance and goals) Evaluation (most)

* Episodes 1a and 1b belong to the same narrative (Marco, Narr. 1)

The episodes 1a and 1b (in Table 5.51 above) offer an example of how the same episode can be coded from several perspectives. It also shows how the constructs of teacher cognition occur in the analysis. Both episodes are part of the same narrative and here separated for visualisation purposes (see Section 4.4.2 for details of narrative and episode). In 1a Marco describes how he presented his planned interactive activity to students and in 1b, he describes the students' performance and activity outcomes.

The examples above are mostly related to teacher knowledge of planning, presenting, monitoring, and evaluating an activity, as well as eliciting from students. Many of the moments marked as beliefs were also considered as generalisation (e.g., *students were able to communicate and interact using the target language*).

The analysis of Marco's episodes shows that thought is usually more subtle than any other construct here explored. Marco articulated cognition in a very straightforward fashion and he does not usually use all the discursive strategies which emerged in other participants' articulation. His positioning towards interaction is direct and with less emotional input than some of the previous participants discussed here.

Marco seems usually well focused on his teaching whilst telling his stories of students' attitudes, successes and failures. The concept of interaction is discussed at length and he illustrates his narratives with clear examples of teacher and students' actions.

5.8 Interpretation of the PEC data analysis

This section offered an overall interpretation of the data analysis of the interrelation between the constructs of teacher cognition, interaction, and the discursive strategies as articulated by the PEC teachers. It introduced the main assumptions made from the analysis, but further discussion is offered later in Chapter 7 including the understandings of both the private and public school contexts.

The main assumptions to highlight from the analysis of the PEC are: the interrelatedness of the constructs of teacher cognition which generates various interpretations; knowledge emerges from the analysis as a key construct; the term *personal* in 'personal practical knowledge' appears as a meaningful idea; teachers' multiple interpretations of interaction; the understanding of the idea of *real interaction*; the codeswitching which in this study occurs mainly in the teachers' spoken narratives; and the discursive strategies and the individual styles of storytelling. These assumptions are discussed throughout Chapter 7.

Another important point to emphasise is that even though Eduardo, Lidia, Flora, Leonor and Marco come from the same professional environment, which offers them ongoing teacher development and peer cooperation, the data analysis shows how they bring their own individual strategies and styles to articulate their professional experience.

6 Analysis and interpretation: the data produced in the public school

6.1 Introduction

This chapter offers the analysis of the data produced in the public school context and follows the same procedures presented in Chapter 5. Therefore, this chapter is organised by participant (Natalia, Teresa, Barbara and Nina) and examines the representations of the four constructs of teacher cognition (knowledge, thought, beliefs and decision-making) and their relationships to the teachers' understandings of classroom interaction. It also analyses the emerging discursive strategies from their narratives, in relation to each of the constructs.

Although the analysis follows the same procedures as used for the PEC, there is an assumption that different results from the narrative analysis presented in the next sections will be found, based on the idea that

> the individual teachers and learners and the relationships between them can therefore be seen as being 'part of' and being 'creators of' classroom contexts as well as 'products of' that context (Wedell & Malderez, 2013, loc. 2666)

Thus, from this perspective, teachers' narratives can be affected in different ways by their contextual influences. In addition, teachers can show in their stories how the *part*, *creator* and *product* of their classroom contexts play their roles in the narrative.

6.2 Analysis by participant

As mentioned in Chapter 5, the analysis was thematic, cyclical and systematic. As with the analysis of the PEC data, this chapter is organised by participant. Therefore, for each participant, the analysis is organised by construct of teacher cognition, to show its relationships to the idea of interaction. Then, the analysis focuses on the emerging discursive strategies. Finally, the data is examined from an inclusive perspective to understand how the articulation of teacher cognition happens in the participants' narratives.

Sections 4.2 and 5.2 described how nine teachers participated in the study, four of whom are from the public school context: Natalia, Teresa, Barbara, and Nina. Similarly to the PEC participants, these four teachers produced written and spoken data in interviews and narratives. Table 6.1 below gives an overview of the data produced by the public school teachers in number of words.

Table 6.1 The data generated by the public school participants (in number of words)

Researchable Actions (RA)	RA 0	RA 1	RA 2	RA 3	RA 4	RA 5	RA 6	N. of words
Participants	1ST contact	Interview 1	Narrative 1	Interview 2	Narrative 2	Interview 3	Group Talk	Individual production of data
6. NATALIA	✓	5,356	**512**	4,973	**536**	4,362	9,227	15,739
7. TERESA	✓	5,380	*2,014*	6,274	**352**	4,129		18,149
8. BARBARA	✓	6,022	*2,292*	4,483	**156**	5,210	-	18,163
9. NINA	✓	2,150	**267**	5,059	**127**	-	-	7,603
Sub-total Public School (Number of words)							9,227	59,654
Total								68,881

The participants presented in Table 6.1 are all from the public school context. As happened to the PEC teachers, they were numbered in order of contribution to the research process. The numbers follow on from the sequence started with the PEC teachers, so the first public school participant, Natalia, is number six (see Section 5.2 for details of the order of participants) and the other teachers follow the sequence ending in Nina, teacher number nine.

In columns RA2 and RA4 (Table 6.1 above) the spoken narratives (in *Italics*) were more prolific than in the written narratives (in **bold**). Also, the focus group discussions are counted by group (in this case, public school), instead of by individual contribution. Two teachers (Barbara and Nina) were not able to take part in all the researchable actions, but the data they produced were analysed in the same way as the others in the study (see Section 4.3 for researchable actions).

6.3 Participant 6: Natalia

6.3.1 Natalia: background information and the data produced

Natalia is an experienced professional engaged in improving her practice and her students' development, as she puts it in her narratives. From the conversations with her I was able to understand much about the language education in the public school and the internal policies which affect the classroom activities and practice. Her narrative shows that she struggles to deliver good quality teaching in crowded classrooms and in schools where language teaching and learning is usually a secondary concern (see Section 1.4).

Natalia's fifteen-year teaching experience is evident in her narratives. At the time of the fieldwork, she had been teaching at the public school visited for about seven years. Her education includes two majors (Portuguese and English) and she teaches both languages in public schools. She has an earnest tone telling her stories and she tries to illustrate her practice by bringing her students' voices into her stories.

Natalia chose to produce her data (spoken and written) mostly in Portuguese. In Narrative 1, though, she wrote part of her response in English. She participated in all the stages of the fieldwork and gave a rich contribution to this study (see Table 6.2 below). Her narratives were delivered in the written mode and her interviews were direct and detailed. Table 6.2 below shows all the data produced by Natalia (the focus, the language, the mode and the number of words).

Table 6.2 Information about the data generated by Natalia

Participant 6: Natalia					
Researchable Actions (RA)		N. of words	Mode	Lang.	Main focus / notes
0	1ST contact	✓	S	L1	1st meeting with teacher at the public school, talking about procedures and paperwork.
1	Interview 1	5,356	S	L1	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	Narrative 1	512	W	L1/L2	Focus on teacher's experience and specific interactive activity in the classroom. Introducing 'teacher Maria' prompt.
3	Interview 2	4,973	S	L1	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	Narrative 2	536	W	L2	Focus on teacher's experience, responding to 'teacher Maria' new prompt, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
5	Interview 3	4,362	S	L1	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students. Referring back to Interview 2 and Focus group discussions.
Total		15,739			
6	Focus group discussions	9,227*	S	L1	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the public school after a group discussion.					
Key: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

Natalia's data production is one of the most complete within the public school. Her articulation was very clear and her working environment seems to deeply affect her decisions. I present Natalia's articulation of the four constructs of teacher cognition, its relationships to interaction and her discursive strategies.

6.3.2 Natalia's articulation of knowledge

Natalia was the first teacher to take part in the research in the public school context, and the first to have her narrative analysed. The analysis follows the same design used for the PEC narrative. The concept of personal practical

knowledge is also seen from an individual perspective and could influence the articulation of the other four constructs. Recapitulating, the idea of *personal practical knowledge* involves the individual teacher's, theoretical, practical and professional understandings (Golombek, 1998).

The episode below is an example of Natalia's articulation of knowledge. She describes an interactive activity which was developed from the textbook. She had explained before that the textbook offers Garfield comic strips in English to introduce topics in the target language and she likes to adapt and use the strips as meaningfully as possible.

> So, the oral skill has been developing and I am linking it to their contexts. Today I had a meaningful activity with them [students] that…they had to present…they had to present…it is the Garfield story. I made a parallel with Garfield, *né*? [Right?] However, instead of Garfield, I asked if they had a pet at home, and most of them have, né? Then, they say that 'Teacher, I don't have only a cat. I have a dog, too.' And another student, 'I have a rabbit.' Then, we go on adding; there comes the demonstrative adjective that is not only 'This is my cat, *fulano*.'… So, 'these are my cats / my dog / my rabbit.' Then, it was a meaningful activity for them, you know, really contextualised. (Natalia, Int. 1)

Original version: Então assim, a oralidade tá sendo trabalhada e eu tô envolvendo o contexto deles. Hoje eu fiz uma atividade significativa com eles que... eles tinham que se apresentar e apresentar... que é a história do *Garfield*. Eu fiz um paralelo aí com o Garfield, né? Que em vez do Garfield, eu perguntei se eles tinham animal em casa, e a maioria tem, né? Aí eles já dizem assim: "Professora, eu não tenho só gato. Eu tenho cachorro também, eu tenho..." aí o outro, "eu já tenho coelho." Aí a gente vai acrescentando, aí já entrou o demonstrativo que não é só "This is my cat" (...) Aí já "these are my cats, my dog, my rabbit." Então, assim, foi uma atividade significativa pra eles, não é? Realmente contextualizou. (Natalia, Int. 1)

The analysis suggests that Natalia's professional knowledge emerges from the episode above when she talks about her ability to engage her students in a contextualised activity. Some of the utterances underlined in the text also demonstrate her awareness of common EFL terminology (e.g., *oral skills*, *contextualised*, *demonstrative adjective*, etc.). In this description of an interactive activity, for example, several elements indicate Natalia's long-time experience. As the analysis shows, although she has a crowded group (of at

least 35 students), Natalia manages to find ways to elicit new vocabulary from her students, contextualise and personalise the topic, as well as make the textbook an effective source of meaningful interaction. Table 6.3 shows the interrelations between knowledge and interaction.

Table 6.3 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
So, the **oral skill** has been developing and I am linking it to their contexts. Today I had a **meaningful activity** with them [students] that…they had to present…	steps to have meaningful interaction	exemplifying interactive activity (oral presentation)
However, instead of Garfield, I asked if they had a **pet at home**, and most of them have, né? Then, they say that 'Teacher, I don't have only a cat. I have a dog, too.'	need to adapt material to students' needs	personalising interaction to fit students' needs
Then, we go on **adding**; there comes the **demonstrative adjective**	elicitation technique and substitution drills	exemplifying students' participation

As can be noted from Table 6.3, the relationship to interaction occurs when she exemplifies the oral activity students were engaged in. Natalia also personalises the topic to keep the students interested in the task and shows that through a single activity, it is possible to explore language topics such as *demonstrative adjectives*. It seems from the episode above that Natalia involves her learners in meaningful tasks to reach her teaching goals. This resonates with the idea of "meaningful learning" discussed in Brown and Lee (2015, p. 71), that is, the ways Natalia finds to motivate her students to successfully learn by co-constructing their knowledge. She also uses some discursive strategies in her narrative (see Table 6.4).

Table 6.4 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Evaluation	I had a **meaningful** activity it was a **meaningful** activity for them, you know, **really** contextualised
Shared knowledge	I made a parallel with Garfield, **né**? [right?] most of them have, **né**? it was a meaningful activity for them, **you know**,
Articulation of students' voices	'**Teacher**, **I don't have** only a cat. **I have** a dog, too.' '**I have** a rabbit.'
Articulation of teacher's voice	'**This is my cat**, fulano.' '**These are my cats** / my dog / my rabbit.'
Uncertainty	No apparent occurrences in this episode.
Generalisation	No apparent occurrences in this episode.

In Natalia's evaluation, the activity was meaningful and in teaching terms it implies collaborative work and successful learning. Teacher and students' voices are evident in the examples of how students participate and how the *demonstrative adjectives* emerge from the activity. As seen in Section 4.4.5, voice is here construed as the role playing, interpersonal relations, and the social context in which they are built (Tardy, 2012).

The analysis shows that the way Natalia articulates knowledge demonstrates how informed she is of EFL teaching in the public school context. From the interpretations here examined also suggest that she is aware of the need to give her students meaningful learning experiences and she uses her knowledge to do so in the best way possible.

6.3.3 Natalia's articulation of thought

Up to now, thought has been perceived as having an abstract nature and has been challenging to analyse. Natalia's narratives were no different. There are several episodes in which Natalia expresses her thoughts about her practice and her articulation of thought also relates to situations she mentions to

illustrate the difficulties produced by her environment. In the episode below she talks about a lesson she planned for the first day of class.

> In the first day of class, I prepared a lesson about 'greetings'. I used several 'flashcards' because that was the material I had available at that moment. In this class I presented a pre-activity (discussion) about the scenes shown in the flashcards. Let's say that 80% of the group was able to answer that the people in the pictures were greeting or saying good-bye in situations of arriving and leaving and meetings. At the beginning, all the questions were in Portuguese, as well as students' answers. On this same day, when I entered the classroom, I greeted them saying, 'Good morning everybody!' 'How are you today?' 'What's up?' I noticed that when I used the last expression all responded that they had it*. From there I explained the new terms, then I asked them to open their books saying, 'Open your books on page…' I showed the book and almost all of them understood my command in English. (Natalia, Narr. 1)

* [students thought it was the smart phone application 'WhatsApp']

> Original version: No primeiro dia de aula preparei uma aula sobre "greetings" Usei vários "flash-cards," já que era o material que eu dispunha naquele momento. Nessa aula, fiz uma pré-activity (discussion), sobre as cenas mostradas nos "flash-cards" digamos que 80% da turma conseguiu responder que as pessoas retratadas nas figuras estavam se cumprimentando e se despedindo, em situações de chegada saída e encontros. Todos os questionamentos no início foram em português, e as respostas dos alunos também. Nesse mesmo dia, quando entrei na sala de aula cumprimentei-os dizendo:"Good Morning everybody!" "How are you today?" "What's up?" Percebi que ao usar a última expressão, todos responderam que possuíam! A partir daí fui explicando os novos termos, então os solicitei que abrissem o livro também dizendo: "Open your books on page..." Mostrei o livro e quase todos compreenderam meu comando em Inglês. (Natalia, Narr. 1)

In this episode, Natalia introduces students to some common expressions in English (greetings) and uses them in the students' practice. The underlined sentences above are evidence of teacher's thoughts. For example, the teacher uses flashcards as *the only material I had available at the moment*. This sentence represents a thought because it brings to the teacher's mind the memory of what accessible resources she has at school. The analysis suggests that the percentage of students who understand certain commands or language can be understood as a thought as well. At this moment, the teacher seems to go back in time and reflect on students who did or did not participate, creating an estimate number to explain her point. Table 6.5 offers the interconnections which can be made between the episode presented and interaction.

Table 6.5 Articulation and interpretation of thought

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
So, the **oral skill** has been developing and I am linking it to their contexts. Today I had a **meaningful activity** with them [students] that…they had to present…	steps to have meaningful interaction	exemplifying interactive activity (oral presentation)
However, instead of Garfield, I asked if they had a **pet at home**, and most of them have, né? Then, they say that 'Teacher, I don't have only a cat. I have a dog, too.'	need to adapt material to students' needs	personalising interaction to fit students' needs
Then, we go on **adding**; there comes the **demonstrative adjective**	elicitation technique and substitution drills	exemplifying students' participation

The analysis shows Natalia commenting on the factors which contribute to students' production in interaction. For example, she mentions the resources, the language used, the vocabulary taught, and the number of students engaged in the activity, and so on. The relationships to interaction are mainly evident in her positioning towards the resources she is able to use. The analysis suggests that language has a dichotomous nature in Natalia's positioning, because it can be seen as either a tool and/or a problem. Thus, language is a tool she can use to reach students understanding, and at the same time, L1 can hamper students' learning in L2. Natalia also uses discursive strategies which make the story interesting (see Table 6.6).

Table 6.6 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Uncertainty	**Let's say that 80%** of the group was able to answer
Articulation of teacher's voice	'Good morning everybody!' 'How are **you** today?' 'What's up?' 'Open **your** books on page…'
Shared knowledge	**Let's say** that 80% of the group was able to answer
Evaluation	Let's say that **80%** of the group was able to answer **all** responded that they had it **almost all** of them understood
Articulation of students' voices	No apparent occurrences in this episode.
Generalisation	No apparent occurrences in this episode.

The articulation of teacher's voice and the shared knowledge strategies, which are not (in teachers' narratives) as common in the written mode, are also evident in this episode. Throughout the analytical chapters, the notion of

voicing teachers or students is more common as a spoken strategy, but the *plenitude of meanings* as proposed in Bakhtinian view can emerge in both modalities (Bakhtin, 1981).

Natalia's articulation of thought can also be interpreted in relation to her knowledge (e.g., the way she approaches students), and beliefs (e.g., in her evaluation of the narrative). As seen in Lidia, Leonor, and the other PEC teachers' episodes, the interrelation of the constructs is evident in Natalia's narrative as well. The analysis points to the difficulties in her teaching setting as her main focus of thought.

6.3.4 Natalia's articulation of beliefs

In Natalia's data analysis, the close connection to the other constructs generated similar results to those found in the other participants' articulation of beliefs. The episode below offers examples of such interconnection between the constructs and interaction. Natalia is giving her opinion about classroom interaction in the context of a public school.

> I think classroom interaction is about everything: between teacher and students, among students. And it is, in my view, a good relationship of the group as a whole. Things should flow especially considering the speaking matter. Even when there is only what they call *fighting*, because there is a lot of fights in the classroom, *né*? It does not happen to me a lot, but when I 'm out of the class…For example, it's like that, if I leave the class with no supervision (…) I leave them with some activity, *né*? There needs to be… [Interaction] would be a good relationship and…the teacher would be understood by the student in relation to the content and to the social situation, I think, as a whole. I think interaction is also a sociolinguistic problem. So, sometimes the language of the teacher can be in a level that the student might not understand. Therefore, I think it happens as a sociolinguistic issue as well. There is a high social difference in the classroom. Sometimes you have a student considered *top*, who is in the public school, and sometimes you have that student who needs to be there because he needs the breakfast, lunch, do you understand? School meal…because he does not have it at home. So, there are many levels. (Natalia, Int. 1)

Original version: Eu acho que a interação em sala de aula é do todo: do professor com os alunos, dos alunos com os alunos. E seria, assim, no meu olhar, um bom relacionamento da turma como um todo. Que as coisas fluíssem principalmente na questão da oralidade. Mesmo quando só tem o que eles chamam agora de "fighting," que tem muito fight na sala de aula, né? Comigo não ocorre muito, mas quando eu me ausento... Por exemplo, assim, se eu deixar a sala só...(...) E eu deixo eles com atividade, né? Tem que ter... [Interação] seria um bom relacionamento e... o professor ser entendido pelo aluno na questão do conteúdo e na questão social acho, assim, como um todo. Acho que a interação ela passa por uma questão até assim da sociolinguística. Então, às vezes, a linguagem do professor pode estar em um nível que o aluno talvez não entenda. Então eu acho que a questão também passa pela questão da própria sociolinguística. Então, uma questão social muito diferenciada, dentro da sala de aula. Às vezes você tem um aluno "top," que tá alí na escola pública e às vezes você tem um aluno que ele tem que estar aqui porque ele precisa do café da manhã, do almoço, entendeu? Da merenda. Porque ele não tem em casa. Então, são muitos níveis. (Natalia, Int. 1)

The problems of her work context have an impact on her articulation. Up to now, the analysis has demonstrated that for the PEC teachers, the major problems in the classroom were the misplacement of students, students' personal difficulties with the language or with a new group, and teacher's concerns about their own approach to teaching and learning. In Natalia's story, besides the crowded classroom (more than 40 students), she is troubled by students literally *fighting* each other, disrespecting teachers, and attending class simply to be able to have a meal. Nevertheless, she believes that classroom interaction happens in her practice. Table 6.7 shows the relationships between Natalia's articulation of beliefs and interaction.

Table 6.7 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
I think **classroom interaction is about everything**: between teacher and students, among students. And it is, in my view, a **good relationship** of the group as a whole	interaction mean good relationships	defining interaction
[Interaction] would be a good relationship and…the **teacher would be understood** by the student in relation to the **content** and to the **social** situation, I think, as a whole. I think interaction is also a **sociolinguistic** problem. So, sometimes the **language** of the teacher can be in a level that the student might not understand.	teachers need to level their language to be understood by students and create a good relationship	defining interaction and positioning towards teacher's roles in interaction
There is a high **social difference** in the classroom. Sometimes you have a student considered *top*, who is in the public school, and sometimes you have that student who needs to be there because he needs the breakfast, lunch, do you understand?	there is a social problem in the public school which affect student learning	positioning towards social problems

As seen in Table 6.7 above, Natalia offers some definitions of interaction in the public school (it is *about everything* and a *good relationship teacher-student*). She also positions herself in relation to the social differences which occur in her context and which affect learning. Natalia is concerned about her role as a teacher in such a context, where social and economic problems are apparent. Table 6.8 shows the discursive strategies Natalia uses to articulate her beliefs.

Table 6.8 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	**there is** a lot of fights in the classroom, *né*? interaction **is** also a sociolinguistic problem **There is** a high social difference in the classroom.
Evaluation	there is **a lot of** fights in the classroom, *né*? It does not happen to me **a lot** a **high** social difference there are **many** levels
Shared knowledge	there is a lot of fights in the classroom, ***né***? I leave them with some activity, ***né***?
Uncertainty	No apparent occurrences in this episode.
Articulation of teacher and students' voice	No apparent occurrences in this episode.

In this episode, Natalia articulates her beliefs about classroom interaction and the issues she needs to deal with in her routine teaching. It is evident that her concern for her students' well-being guides her beliefs about what makes good interaction (e.g., *about everything: between teacher and students, among students*). This connection to her students emerges in her other episodes, as well.

6.3.5 Natalia's articulation of decision-making

Decision-making, as discussed before in the analysis of other participants, carries some concrete aspects which can facilitate its identification in teacher's articulation. It is usually evident in the routine actions teachers describe in their narratives. The next episode, for example, brings a

discussion about the use of the target language and teacher's procedures in an EFL classroom in the public school. In this episode, there are several examples of decision-making which emerge from Natalia's articulation (see underlined sentences below).

> Well it is very difficult to reach the target language when students live in a country that does not speak it (English). I think I always have some similar situations like that, but in my case, this year, students are beginners it is the first moment they study English. Therefore, I usually explain the same subject at least five or six classes. In addition, students are very shy. Then they are afraid to commit some mistakes when they speak any foreign language. This away, they prefer to speak in their native language (Portuguese). In my class level, we just do some short dialogues, but I had a situation that was - *First class moment* (the tittle – Meeting a new classmate). Students needed to introduce themselves to the new students, after that, they needed to ask some questions each other, such as: name, nickname, last name, age, like/dislike etc. I taught about this subject, in the first class, the second and the third class. It was the same. Then I considered in that moment, the students have already known how to speak the dialogue in English, because in my point of view, it was short and an easy dialogue, but when I gave them 10 minutes to present the dialogue. It was funny! (Natalia, Narr. 2)

As the analysis shows, Natalia gives her opinion about the problems she experiences in her context (students prefer to speak Portuguese and she needs several classes to cover the same topic). The analysis shows the sequence of the interactive activities – after she explains, the students make short dialogues, introduce themselves, and present. Table 6.9 shows how the relationships between decision-making and interaction occurred in the analysis.

Table 6.9 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
I usually **explain** the same subject at least five or six classes. In addition, students are very **shy**. Then they are afraid to commit some mistakes when they speak any foreign language.	to explain the activity	explaining interaction
This away, **they prefer to speak in their native language (Portuguese).** In my class level, we just do some **short dialogues**,	to accept L1 in class	positioning towards l1 in interaction
Students needed to **introduce** themselves to the new students, after that, they needed to ask some **questions** each other, such as: name, nickname, last name, age, like/dislike etc.	to let students produce in pairs/groups	exemplifying the activity

In the episode above, Natalia explains the type of activity she presents to her beginner students. Because of the large number of students in class, she needs around six classes to make sure the students understand and perform the activity without stress and most of the time, they use their mother tongue to communicate. As a result, her students are able to produce short dialogues in the target language. Her decisions influence the results of the interaction, which seem to be appropriate for the students in her context. Telling her story, Natalia uses some emerging strategies (see Table 6.10 below).

Table 6.10 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Evaluation	it is **very** difficult to reach the target language I think I **always** have some similar situations students are **very** shy we **just** do some short dialogues
Generalisation	**it is** very difficult to reach the target language when students **live** in a country that does not speak it students **are** very shy they **are** afraid to commit some mistakes when they **speak** any foreign language
Shared knowledge	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.
Articulation of teacher and students' voices	No apparent occurrences in this episode.

It is interesting to note that in Natalia's episode, just two strategies emerged: evaluation and generalisation. The former is apparent from the use of *very*, *always*, and *just*; the latter is evident in overall statements made in the present tense. The generalisation in this case is related to facts that are not only true for Natalia's learners, but for all public school students.

Natalia's articulation of decision-making shown in the analysis is direct and serious. Also, from the analysis of the other constructs, Natalia does not use the discursive strategies very often, contributing to the serious tone of her narrative. Decisions are made to improve student learning and the teacher seems to be very patient about making it happen in her classroom.

6.3.6 Discussion of Natalia's data analysis

In Natalia's narrative, similarly to what occurred in the PEC, the analysis shows that the constructs of teacher cognition have closely interrelated meanings. The four constructs seem to have a mutual relationship creating multiple understandings, and consequently, multiple coding in the episodes analysed. Table 6.11 below shows how the analysis was developed in view of these inter-connections of meanings.

Table 6.11 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. YOU ARE NOT REALLY PREPARED FOR A CLASSROOM WITH 40 STUDENTS. Today in the public school, **I think it improved a lot in the material aspect, because today we have teaching material. In the past, we had a chalk board and we didn't have air conditioning…WHEN I STARTED TEACHING IT WAS A LOT WORSE. TODAY THE STUDENT HAS EVERYTHING… HE ONLY NEEDS TO REALISE HE NEEDS TO STUDY, TOO. AND THIS IS A FAMILY PROBLEM…** (Natalia, Int. 3)	Positioning (teaching conditions – past and present)	Generalisation (40 students) Evaluation (a lot worse)
	2. Interaction happens, but IT DEPENDS ON THE LEVEL AND THE GRADE…IN THE PUBLIC SCHOOL? I THINK IT IS POSSIBLE WITH HALF A DOZEN STUDENTS IN THE PRIMARY SCHOOL, OK? (Natalia, Int. 3)	Positioning (existence of interaction)	Generalisation (interaction happen) Shared knowledge (OK?)
	3. **In my classes, I never had a situation of interaction only in English with all the class. I had with 2 or 3 students who had already studied in other places.** So, sometimes they reveal themselves even with the teacher in English. **IT HAS HAPPENED IN MY SCHOOL. (…), BUT I NEVER HAD INTERACTION ONLY IN ENGLISH.** IT IS A DREAM TO ME, NÉ? (Natalia, Int. 3)	Exemplifying (interaction and use of L2) Positioning (dream)	Generalisation (never had interaction in L2) Evaluation (never) Shared knowledge (né?)
	4. For example, in the 9th grade last year, there was a student who was very fluent and I asked her: 'Do you study? Do you study English in a PEC?' She said: 'No, teacher, but I love music.' So, SHE HAD ALREADY FOUND A REASON TO LEARN, RIGHT? SHE HAD HER MOTIVATION. (Natalia, Int. 2)	Positioning towards student's intrinsic motivation	Articulation of teacher and students' voices Shared knowledge (Right?) Evaluation (very)

Original versions
1. Você não está preparado mesmo pra uma sala com 40 alunos. Atualmente, na escola pública, eu penso que melhorou mais no aspecto material, que assim, que hoje a gente já dispõe de material didático. Que antigamente a gente tinha um quadro com giz e não tínhamos ar-condicionado... quando eu comecei era bem mais precário. Hoje não, o aluno tem tudo... só falta ele descobrir que ele precisa estudar. E isso é uma questão cultural familiar (...) (Natalia, Int. 3)
2. Interação acontece, mas depende de que nível... de que série... Na escola pública? Eu penso que isso é possível com meia dúzia de alunos no ensino médio, tá? (Natalia, Int. 3)
3. Na minha aula, eu nunca tive uma situação de interação puramente em inglês com toda a turma. Tive, assim, com 2 ou 3 alunos que já estudam fora, então às vezes eles se manifestam até com o professor mesmo em inglês... já aconteceu essa situação lá na escola (...) Mas nunca tive uma interação puramente em inglês. É um sonho até isso, né? (Natalia, Int. 3)
4. Por exemplo, no nono ano do ano passado tinha uma aluna bem fluente, e eu até perguntei pra ela: "você estuda? Você estuda inglês fora em algum cursinho?" Ela disse: "não, professora, mas eu adoro música." Então ela já tinha um estímulo, já tinha uma reason, não é? Ela já tinha motivation. (Natalia, Int. 2)

Table 6.11 above presents Natalia's episodes analysed from an inclusive manner. The different marks on the episodes (underscoring, bold, capitals, and grey shading) demonstrate how the interpretation of the constructs of teacher cognition enables multiple coding. The articulation of teacher cognition in relation to interaction and the discursive strategies are combined

in a way that they become integrated within each other. The analysis shows that generalisation is about teaching conditions and students' attitudes to learning. Decision-making is not very evident, perhaps because the episodes are about the factors which influence her practice and not about the classroom itself. Interaction is mentioned as the topic of the narrative, not through a clear description of what it means to her.

In general, Natalia articulates teacher cognition by describing her routine in the context in which she is immersed. The inclusive analysis shows that a major difference between Natalia's articulation and the PEC teachers' relates to their attitudes towards the setting and the teaching conditions. For example, Natalia needs to deal with problems (e.g., underprivileged students) which cross the line between EFL teaching and social welfare. Also, her thoughtful concern for her students' development is affected by situations beyond her control. For example, in her narrative she talks about kids who need to attend school to get a meal; teachers who need to bring copies of text from home because the school does not provide enough copies for students; students who do not care about learning; and parents who do not support their kids' learning process.

In conclusion, it seems that Natalia understands that classroom interaction is not always clearly evident in the crowded classes she described, and that her efforts to make it happen need to be very strong. She has a professional attitude when she talks about her teaching experience and shows deep concern for her work environment – the problems and the possible solutions. She articulates her knowledge, thought, beliefs and decision-making in a

serious and direct way, showing she understands the limitations of her teaching context.

6.4 Participant 7: Teresa

6.4.1 Teresa: background information and the data produced

Teresa is an experienced teacher who works mostly with young learners and teenagers. She was the second public school teacher to participate in the research process to which she gave a valuable contribution. She offered information about her practice and spoke about the aspects which influence her teaching. As the other participants, she is also interested in her students' development.

Teresa has been teaching EFL for eight years and had been working for about two years in one of the schools visited at the time of the fieldwork. She teaches in two schools which have distinct characteristics: one is a regular school with around 45 to 50 students in class, and the other is a full time school with only 25 students.

Teresa has a major in English, and when possible, participates in local workshops in the field of EFL teaching. She said she loves teaching the language especially to young learners, and her intrinsic motivation for teaching EFL was visible in her gestures and style of speaking. Her data production was the highest in number of words (over 18 thousand words) and she was usually completely open when asked about her classroom and her teaching experience.

Teresa's production (spoken and written) is only presented in Portuguese. She contributed in all the stages of the fieldwork and had a valuable involvement in the current study (see Table 6.12). She delivered her narratives in the spoken and written modes and she had an earnest tone in the interviews. Table 6.12 below shows all the data produced by Teresa.

Table 6.12 Information about the data generated by Teresa

Participant 7: Teresa					
Researchable Actions (RA)		N. of words	Mode	Lang.	Main focus / notes
0	1ST contact	✓	S	L1	1st meeting with teacher at the public school, talking about procedures and paperwork.
1	Interview 1	5,380	S	L1	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	Narrative 1	2,014	S	L1	Focus on teacher's experience and specific interactive activity in the classroom. Introducing 'teacher Maria' prompt.
3	Interview 2	6,274	S	L1	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	Narrative 2	352	W	L1	Focus on teacher's experience, responding to 'teacher Maria' new prompt, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
5	Interview 3	4,129	S	L1	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students. Referring back to Interview 2 and Focus group discussions.
Total		18,149			
6	Focus group discussions	9,227*	S	L1	Focus on teachers' understandings of classroom interaction (definitions, planning, students' interaction), use of L1/L2 in the classroom, other emerging themes.
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the public school after a group discussion.					
Key: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

Similarly to Natalia, Teresa's data production is very comprehensive, and the time spent with her was usually very productive and informative. The next sections offer Teresa's articulation of the four constructs of teacher cognition, their relationship to interaction and the discursive strategies which she chose to talk about her practice.

6.4.2 Teresa's articulation of knowledge

Teresa, as do all the other participants, articulates her individual knowledge and approach to EFL practice in relation to her own teaching background. Teresa's articulation of knowledge is illustrated in the episode below where she talks about the number of students in her different groups and schools. She also describes the types of interaction she is able to develop with her learners.

> I have 25 students in each group. I have six groups. (…) so, it's possible to better interact with them, with the group…For example, if I had a class with 30/40 students, as I have in the 6th grade, né…sometimes I even have a class with 50 students. Then, how is learning going to happen, né? If with 25 students it is difficult, né (because you need to interact with all of them), let alone a class with 40/50 students. How do you…? You need to have methodology to have students pay attention, because it's difficult, but they like it. You understand? You need to have methodology so that they like to participate in…so now I have a…now I want to make an activity with them. I arrive and get dressed, né, as a character, né… To create a character and talk to them in the target language…talk incorrectly, for example. I tell them: 'Today we are going to speak in English, everything in English'. So, I say: 'I know that *laranja* is apple'. So, they say: 'No, teacher, it's not apple, it's orange'. Understand? Thus, I teach the wrong way so that they say the right word…to see if they really learned something, if they acquired some learning, the vocabulary I use. Understand? There is another activity I use the little ball and I throw it like that [she shows how], from desk to desk, one student passes to another. Then, I throw the ball to the first: 'Say a colour in English'. So, he says: 'Yellow'. Then, I pass to the next student and he needs to say 'yellow' and another colour. Then, he passes to the next. So, the next needs to say 'yellow, orange, and his colour. Understand? So, that's the interaction for them to learn, to see if they learned. They cannot repeat the colours; they always need to say different colours. (Teresa, Int. 1)

Original version: Eu tenho 25 alunos em cada turma. São seis turmas. (...) E aí dá pra interagir mais com eles, com a sala... Por exemplo, se eu tivesse uma sala com 30/40 alunos, como eu tenho na sexta série, né... as vezes eu tenho alunos a sala de aula com 50 alunos, então qual é o aprendizado que vai ter, né? Se com 25 alunos é difícil, né, porque você tem que interagir com todos, imagina uma sala com 40/50 alunos. Como é que você... você tem que ter muita metodologia pra conseguir que o aluno preste atenção, porque é difícil, mas eles gostam, entendeu? Tem que ter metodologia pra eles gostarem mais de participar da... e aí eu tenho uma... agora eu tô querendo fazer uma brincadeira com eles de chegar, me vestir de um personagem, né...Criar um personagem, e falar com eles na língua... errado, por exemplo. Eu falo pra eles: "hoje a gente vai falar em Inglês, tudo em Inglês." Aí eu chego assim... "eu sei que laranja, laranja é apple." Aí eles: "não, professora, não é apple! Laranja é orange," entendeu? Então eu ensino o errado pra eles falarem o certo, pra ver se eles realmente aprenderam alguma coisa, adquiriram algum conhecimento na área, nessas palavras que eu falo, entendeu? E aí tem outra da bolinha. Eu pego uma bolinha e aí eu fico jogando assim, de carteira em carteira, um vai passando pro outro. E aí eu jogo a bolinha pro primeiro: "fala uma cor em Inglês." Aí ele fala: "yellow." Aí eu passo pro de trás, o de trás ele tem que falar o yellow, mais a outra cor. Aí passa pro outro. Aí o outro da frente tem que falar yellow, orange e a cor dele, entendeu? Então é assim, a interação pras eles aprenderem, pra ver se eles aprenderam. Não pode repetir a mesma cor, tem que sempre falar outras cores diferentes. (Teresa, Int. 1)

The underlined utterances above are considered as evidence of Teresa's articulation of knowledge. For example, she indicates she is aware of the difficulties of teaching a crowded class, of the demand to know the appropriate methodologies, and of the need to benefit student learning. Table 6.13 below shows the relations between the articulation of knowledge and interaction

Table 6.13 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
it's possible to **better interact** with them, with the group…For example, if I had a class with **30/40 students**, as I have in the 6th grade, né…sometimes I even have a class with 50 students. Then, **how is learning going to happen**, né?	number of students in class affect interaction and learning	positioning towards difficulties encountered in public school context
You need to have **methodology** to have students pay attention, because it's **difficult**, but they like it. You understand? You need to have methodology so that **they like to participate in**…	appropriate methodology makes the difference in dealing with the difficulties	teacher's awareness affects students' will to participate in interactive activities
I want to make an **activity** with them. I arrive and get dressed, né, as a **character**, né… To create a character and **talk to them in the target language**…talk **incorrectly**, for example.	different activities which can engage students in practicing the language	exemplifying interactive activity in which students find and correct errors in the language
There is **another activity** I use the little ball and I throw it like that (she shows how), from desk to desk, one student passes to another. Then, I **throw the ball** to the first: 'Say a colour in English'. So, he says: 'Yellow'. Then, I pass to the next student and he needs to say 'yellow' and another colour.		exemplifying interactive activity in which students say words in the target language

Teresa gives examples of two activities in which students interact, which seems to be rather mechanical or repetitive. However, it is understandable that in a big group of young learners (25 students in this case) the activity presented offers the teacher some control. In other words, she manages students' attention and, consequently, their behaviour (e.g., they need to be attentive to participate in the activity).

The need to keep children's attention in the language classroom is discussed by Brown and Lee (2015, pp. 110-113). They argue that teachers need to consider their students age, *cognitive development*, and affective aspects in order to maintain their *attention span* (the time they are able to focus on any activity). In their view,

> more difficult concepts or patterns require more *repetition* than adults need, but not to the point of boredom! Short, snappy drills may be very helpful. (Brown and Lee, 2015, p. 111)

Thus, in the case of Teresa's activity, it seems she is trying to avoid the boredom of repetition alone and is eliciting from her students the correct names for the fruits and the colours (see episode above). She is also combining physical and cognitive attention in her game as well.

The analysis shows that Teresa is knowledgeable about the challenges of how to keep her students' attention in class. Her students interact according to her plans and both teacher, and it seems, students need to be motivated to produce effective interaction. The concern for students' well-being seen in Teresa's episode resonates with the idea of considering affective aspects of teaching children, suggested by Brown and Lee (2015). This theme recurs in Teresa's narrative and I return to this topic in the final discussion of her data analysis (in Section 6.4.6). Table 6.14 shows some discursive strategies which occur in her narrative.

Table 6.14 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Evaluation	it's possible to **better** interact it is **difficult**, né to see if they **really** learned something they **always** need to say different colours
Shared knowledge	Then, how is learning going to happen, **né**? he next needs to say 'yellow, orange, and his colour. **Understand**?
Articulation of teacher's voice	I tell them: 'Today **we are going to speak in** English, everything in English'. So, I say: '**I know that *laranja* is apple'**.
Articulation of students' voices	So, they say: '**No, teacher**, it's not apple, it's orange'.
Generalisation	You **need to have** methodology **to have** students pay attention, because **it's** difficult, but they like it.
Uncertainty	**If** with 25 students it is difficult, né (because you need to interact with all of them), let alone a class with 40/50 students. How do you…?

Table 6.14 above shows that shared knowledge is apparent in the terms *né* and tags such as *understand?* The term *né* is normally used as a discourse marker which can indicate confirmation or an agreement request to the listener (Houaiss, 2001), and Teresa makes use of *né* frequently in her episodes.

Teresa also articulates the teacher and students' voices whilst explaining her activities. In fact, she presents an example of a dialogue between the teacher and her students. Uncertainty is apparent in the use of the conditional (*if with 25 students it is difficult*…). In Portuguese this utterance implies that she does not know what might happen if she has more than 25 students.

As seen in the analysis of Teresa's articulation of knowledge, she seems to be aware of the needs of her young students and uses all the necessary resources (games and role playing) available to her. She mentions that teachers need to have the *methodology* to know what to do. She does not give details of such a methodology, but she exemplifies her actions in the class to illustrate the concept.

6.4.3 Teresa's articulation of thought

Thought is usually subtly articulated in Teresa's narratives. As seen in previous participants' episodes, the idea of thought emerges in combination with other constructs of teacher cognition, especially beliefs and knowledge. The following episode is a good example of that.

> It is rewarding to the teacher when he reaches his objectives. He teaches and at the same time learns with the students. It's an interaction between teacher and student. A very productive activity is the dialogue in pairs and students like to go to the front of the class and speak in English asking the name of the friend, the age… 'How are you?' – a conversation of what they learned in the classroom. And they learn without looking at the book. The objective of the activity is to overcome the fear of speaking in public and they did very well, because they like this type of activity and even compete to be the first ones. I could describe several situations such as games with balloons, bingo with numbers in English, song lyrics, etc. (Teresa, Narr. 2)

Original version: É gratificante para o professor quando ele alcança os seus objetivos. Ele ensina e ao mesmo tempo aprende com os alunos. É uma interação entre professor e aluno. Uma atividade bem produtiva é o diálogo em dupla e eles gostam de ir para a frente dos colegas e falar em inglês perguntando o nome do colega, a idade..."como vai você?" – uma conversação do que eles aprenderam em sala de aula. E eles aprendem sem olhar o livro. O objetivo da atividade é perder o medo de falar em público e eles se saíram muito bem, porque eles gostam dessa atividade e até discutem para serem os primeiros. Eu poderia descrever varias situações como brincadeiras com balões, bingo com os números em inglês, letras de músicas etc. (Teresa, Narr. 2)

The whole text above can be considered as an extended thinking episode, which carries several specific extracts of thought. Thus, the whole episode relates to the *rewarding* moments teachers experience and the interaction between teacher and students. Table 6.15 shows the connections between the articulation of thought and interaction.

Table 6.15 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
It is **rewarding** to the **teacher** when he reaches his objectives. He **teaches** and at the same time **learns** with the students. It's an **interaction** between teacher and student.	the rewarding moments in which teacher learns from students in interaction	interaction happen between teacher and students and provide learning for both
A very **productive activity** is the **dialogue** in pairs and students like to go to the front of the class and speak in **English** asking the name of the friend, the age… 'How are you?' – a conversation of what they learned in the classroom.	dialogues make productive interaction	Exemplifying interaction – dialogues
I could describe several **situations** such as **games** with balloons, bingo with numbers in English, song lyrics, etc.	other types of activities	positioning towards several interactive activities

In Table 6.15, Teresa articulates the relationship between interaction and thought in a direct and thorough manner. Because she is in fact describing interactive activities, the relation to interaction is easily apparent in this episode. For example, Teresa mentions three types of interaction which happen in the classroom: interaction between teacher and students, dialogues, and games. This shows that interaction has a complete meaning in her view, that is, every activity with actions shared by individuals in the classroom can be considered as interaction. Thus, it can be observed that her thoughts are comprehensive (teachers *learn from students*, practice the language through *dialogues*, and exercise during a variety of *games*). The last example revisits the idea of students' happiness discussed in Section 6.4.2 whereby students need to have some entertainment in the classroom to be happy and learn. Table 6.16 presents the discursive strategies which emerged from Teresa's story.

Table 6.16 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	**It is** rewarding to the teacher when he **reaches** his objectives. **It's** an interaction between teacher and student.
Evaluation	A **very** productive activity is the dialogue they did **very well**
Articulation of students' voices	'How are you?'
Articulation of teacher's voice	No apparent occurrences in this episode.
Shared knowledge	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

The episode is a written narrative and as such, has some specific characteristics. As noted before, some strategies, such as the articulation of teacher or students' voices and shared knowledge, are more common in spoken than in the written narratives and this episode supports this argument. Thus, generalisation is mainly about interaction and occurs in the present tense.

Interestingly, in her interviews, Teresa was one of the most motivated teachers in the research process. However, her narrative about her practice follows a serious tone as seen in Leonor and Natalia's data, for example. Her articulation of thought also shows the interrelation to teacher knowledge.

6.4.4 Teresa's articulation of beliefs

In the episode chosen to illustrate the articulation of beliefs in Teresa's data analysis, it is possible to note her voice emerging from the text. As a spoken narrative, the language used is relatively informal with repetitions, pauses, and long, but fragmented utterances. She was asked about the ways interaction happened in her class and among other examples, she discusses the role of the mobile phone in her practice.

> Well, you know, it is like that… now at the full time school I am working very well because students cannot take their cell phones with them. Understand? (…) and at the regular school they have their cell phone with them all the time. So, they do not pay attention to the class, né (…) but students have been

> already so used to the mobile that for them it is a working or study tool. So, what I do? (…) the ones who have the cell phone get together with the ones who don't have, I write some words on the board and say: 'People, do you have an English dictionary? No? So, you can use the cell phone. Look up the words I taught, OK? So, there needs to be an interaction, we need to be in harmony with them, because if you are going to say something because of the cell phone you are going to end up not teaching the lesson. So, I'd rather work with a tool, you know, if we have the phone, because if it is to use it, let's use it… because all the 6th grade students have their phone. (Teresa, Int. 1)

Original version: TN1a: Pois é, né... é porque é assim... agora na escola tempo integral eu tô trabalhando muito legal assim porque eles não podem levar celular pra sala de aula, entendeu?(...) e na escola regular os alunos estão todo tempo com o celular, então eles não prestam atenção na aula, né.(...) mas os alunos estão já tão acostumados com o celular que pra eles é uma ferramenta já de trabalho, de estudo. Aí o que que eu faço? (...)aí quem tem celular junta com o colega e eu falo, eu coloco algumas palavras no quadro, e digo: "gente, vocês trouxeram dicionário de Inglês? Não? então podem usar o celular, pesquisem as palavras aí que eu ensinei, tá? T(...) Então tem que ter essa interação e entrosamento com eles, senão se você for falar por causa de celular... você vai acabar não dando a sua aula... Então eu prefiro trabalhar com a ferramenta, né, se tem um celular, então se é pra usar, bora usar. Porque os alunos de sexta série todos tem celular. (Teresa, Int. 1)

There are several examples of beliefs in the episode above (see underlined utterances). The analysis shows that in Teresa's beliefs, the classes in which students do not use the mobile phone are more effective, but she can take advantage of the device and use it as *a tool* to facilitate learning. The connections to the idea of interaction are seen in Table 6.17 below.

Table 6.17 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
at the **regular school** they have their cell **phone** with them all the time. So, they do **not pay attention** to the class, né (…) but students have been already so used to the mobile that for them it is a working or study **tool**.	phones in class get students distracted	positioning towards problems which might affect interaction
So, what I do? (…) the ones who have the cell phone get together with the ones who don't have, I write some **words on the board** and say: 'People, do you have an English **dictionary**? No? So, you can use the cell phone. **Look up** the words I taught, OK?'	teachers need to make decisions which help students participate	defining activities which can trigger interaction exemplifying activiy
So, there **needs** to be an **interaction**, we need to be in harmony with them, because if you are going to say something because of the cell phone you are going to end up not teaching the lesson. So, I'd rather work with a tool, you know, if we have the phone, because if it is to use it, **let's use it**…	if there's a tool, use it	positioning towards need to connect with students' needs

Teresa gives some definitions of interaction in the public school (*about everything* and *good relationship teacher-students*). This resonates with Leonor's definition (e.g., *Everything that goes on between... among students, between students... students and teacher*, Section 5.6.4) and Natalia's (e.g., (…) *about everything: between teacher and students, among students*, Section 6.3.4). Teresa also positions herself in relation to the social differences which occur in her teaching context and which can affect learning. This also seems to be a recurring topic in her narrative. Table 6.18 shows how the discursive strategies occur in this episode.

Table 6.18 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	students **cannot take** their cell phones with them at the regular school they **have** their cell phone with them
Evaluation	I am working **very well** their cell phone with them **all the time**
Shared knowledge	**you know**, it is like that… their cell phones with them. **Understand**? do not pay attention to the class, **né?** Look up the words I taught, **OK?** I'd rather work with a tool, **you know**
Articulation of teacher's voice	'People, do **you** have an English dictionary? No? So, **you** can use the cell phone. Look up the words I taught, OK?'
Articulation of students' voice	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

Teresa's articulation of beliefs seems to follow a pattern, showing links between the constructs. The analysis shows that her beliefs are closely connected to her knowledge of her own context and of her profession.

6.4.5 Teresa's articulation of decision-making

In Teresa's episodes previously analysed, several decisions are described. For example, she expresses her wish to create an activity (Section 6.4.2), she lists the probable activities she can undertake with her students (Section 6.4.3), and she uses the mobile phone as a support tool for student learning (Section 6.4.4). Now, in the episode below, Teresa's articulation of decision-

making is in relation to a lesson about verbs. Her students do not want to have such a lesson, but she maintains her original plans.

> It was a lesson about verbs. I brought the verbs…the verbs for them because they also learn verbs in Portuguese, né? So, I wanted to teach them in English. So, I said: 'Look. Verbs are very easy, people. It's easier in English than in Portuguese'. And then I started to write some verbs on the board, né? Then I asked them: 'Let's do it. Somebody please, say a verb.' So, they said: 'Ah, this class is very boring, because the verbs lesson in Portuguese is boring, let alone in English'. I said: 'No, but you will like it. They: 'Let's make another thing. Let's play, let's sing. Let's do another activity. Another day you teach the verbs.' And I said: Noo. I want to teach the verbs today, because the verbs are part of the activity we are going to do next class. And because you have learned them in Portuguese, now you will learn them in English. I said, 'It's easy'. So, I taught them the verb To Be, and I wrote the verb for them, né? (Teresa, Int. 2)

Original version: (...) Era uma aula de verbos. Eu trouxe os verbos... os verbos pra eles porque eles aprenderam no português, né? Então, eu queria ensinar no inglês. E aí eu disse, "Olha, o verbo é muito fácil, gente. Então é mais fácil o verbo no inglês do que no Português." E aí eu comecei a colocar alguns verbos, né? No quadro, né? Aí eu perguntei pra eles, "Bora, alguém, por favor, fala um verbo," aí eles, "Ai, essa aula é muito chata. Porque é aula de verbos e no português é chato, imagina no inglês." Falaram. "Não, mas vocês vão gostar." "Então bora fazer outra coisa. Bora brincar de... bora cantar. Bora fazer outra atividade. Outro dia a senhora ensina verbo." Eu digo, "Nãão, eu quero ensinar o verbo hoje porque vocês precisam porque o verbo, ele faz parte também da atividade que eu vou passar pra vocês na próxima aula. E você tem... já que vocês aprenderam do português, agora vamos aprender do inglês." Mas eles... Eu dizia, "É fácil." Aí eu fui ensinar o verbo To Be e coloquei o verbo pra eles, né? (...) (Teresa, Int. 2)

The episode above shows a sequence of decisions made by Teresa. She presents her students with a verb lesson and wants to keep to her plan to have a follow-up class which links to the one she is describing. Teresa makes a connection with the Portuguese lessons (students had learned the verbs in the mother tongue, too). Although it is not clear in the text, note that many public schools follow interdisciplinary planning, which tries to connect all the different subjects by teaching similar topics. Teresa does not discuss this, but the analysis suggests that she is trying to facilitate learning when she links L1 to L2. Teresa's episode can also be seen as exemplifying the link between decision-making and interaction. Table 6.19 below shows such connections.

Table 6.19 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
I **brought the verbs**…the verbs for them because they also learn verbs in **Portuguese**, né? So, I wanted to **teach** them in **English**.	to teach verbs	explaining topic for interaction relating L1/L2
And then I started to **write** some verbs on the board, né? Then I **asked** them: 'Let's do it. Somebody please, **say a verb**.' So, they said: 'Ah, this class is very boring, because the verbs lesson in Portuguese is boring, let alone in English'. I said: 'No, but you will like it.	to elicit the verbs from students and convince them to participate	defining activity
So, I **taught** them the verb **To Be**, and I wrote the verb for them, né?	to maintain her original plan	exemplifying activity performed

In the analysis, Teresa does not explicitly mention interaction in her episode, but she is presenting her students with material (verbs) for a future activity. As noted from the analysis, the interaction happens between the teacher and students. It is not clear whether the students responded to the elicitation (*say a verb*) because Teresa only says she taught the verb *to be*. In this case how much scaffolding Teresa is offering in her practice is unknown or how aware she is of her actions, as discussed in Bailey (2006) is not clearly stated. Thus, the idea of *teaching* seems to imply both concepts. In relation to discursive strategies, Table 6.70 presents the emerging ones.

Table 6.20 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Evaluation	Verbs are **very** easy this class is **very** boring,
Articulation of teacher's voice	I said: '**Look**. Verbs are very easy, people. It's easier in English than in Portuguese'. '**Let's** do it. Somebody please, **say** a verb.'
Articulation of students' voices	So, they said: 'Ah, **this class** is very boring, because the verbs lesson in Portuguese is boring, let alone in English'. '**Let's** make another thing. **Let's** play, **let's** sing. **Let's** do another activity. Another day **you** teach the verbs.
Shared knowledge	they also learn verbs in Portuguese, **né**? I started to write some verbs on the board, **né**?
Generalisation	**Verbs are** very easy, people **It's** easier in English than in Portuguese'.
Uncertainty	No apparent occurrences in this episode.

Teresa articulates both the teacher and students' voices in a complete dialogue between them, as noted previously. Interestingly, this episode suggests that the students seem to be comfortable arguing with the teacher and resisting her lesson plan, giving evidence of some learner empowerment (or *problem behaviour* as discussed in Harmer, 2001, p. 126), though her final decision wins the argument.

Thus, Teresa articulates decision-making in her narrative in a direct way through which she shows a little of her practice. In her illustration of interaction she presents the idea of teaching (as presenting students with new activities) and student empowerment (letting students express themselves). However, this empowerment can also be seen as a problem behaviour whereby the teacher needs to know the actions to take in order to prevent it happening again (Harmer 2001, p. 127).

6.4.6 Discussion of Teresa's data analysis

The analysis offers a view of Teresa's articulation of teacher cognition regarding interaction. The previous analysis of Teresa's production shows that the constructs keep the same interrelation which emerged in the PEC and in Natalia's data analysis. Table 6.21 offers the inclusive (overall) analysis of Teresa's episodes. Not all the emerging themes occur in all the episodes in her articulation.

Table 6.21 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. **So, [interaction] is this…to interact with the children, né,** using new methodologies, with…Well, we work with music, and we interact with them. **I arrive and make games with them**, like Bingo, do crossword, noughts and crosses, everything in English, né? Then, I DO THESE ACTIVITIES. **SO THAT EVERYBODY LIKES IT**. THEY LIKE IT BECAUSE IF YOU ARE ONLY TRADITIONAL, ALL THE TIME, ONLY WRITE, WRITE, WRITE, DO THE EXAM, WRITE, DO THE EXAM… (…) THEN, THEY WILL NOT LIKE ENGLISH BECAUSE IT IS DIFFICULT, né? Because **SOMETIMES THEY DON'T EVEN KNOW PORTUGUESE**, LET ALONE ENGLISH. So, we have to offer tools, né, and look for tools to help them like the English language and learn more and more. **Learning through play… LEARNING THROUGH PLAY THAT WILL MAKE THEM LIKE IT EVEN MORE**.	Defining interaction Positioning (new methods to keep students interested) Exemplifying types of activities (games, music)	Generalisation (don't know L1, offer tools) Evaluation (repetition *write, even, more and more, even more*) Uncertainty (if clause) Shared knowledge (*né?*)
	2. **That's interaction**. IT'S TO HAVE STUDENTS INTERACTING AMONG EACH OTHER, né? So, **I don't want to participate only with one student**, THERE NEEDS TO HAVE INTERACTION BETWEEN ALL OF THEM, TO PRODUCE KNOWLEDGE. For example, I make an activity in pairs. Then, they produce a dialogue, like that, in pairs. So that one asks the name, then the age, and they make a dialogue, ne? 'What's your name?', 'My name is…', 'How old are you?' **Then the other answers. So, it is a dialogue.** EVERYBODY INTERACTS, EVERYBODY LEARNS, né? And **they also repeat the words I say**.	Defining interaction Positioning (how interaction takes place) Exemplifying (pair work, dialogue, repetition)	Generalisation (interaction among students and teacher) Shared knowledge (*né?*) Articulation of students' voices (dialogue)

* Both episodes belong to the same interview (Teresa, Int. 1)

Original version (Teresa, Int. 1)
1. Então [interação] é isso... interagir com as crianças, né, com novas metodologias, com... é, a gente trabalha assim muito na... na música, então a gente interage com eles. Eu chego, faço brincadeiras com eles assim de bingo... faço palavras cruzadas, jogo da velha, tudo no Inglês, né? Aí eu faço essas dinâmicas. Assim, todos gostam. Eles gostam porque se você for só tradicional, todo tempo, aquela coisa só de escrever, escrever, escrever, fazer prova, escrever, fazer prova... (...) Aí eles não vão gostar do Inglês, porque já é difícil, né? Porque às vezes não sabe nem o Português e já é difícil o Português, imagina o Inglês. Então a gente tem que armar ferramentas, né, e buscar ferramentas pra eles gostarem da língua inglesa e aprender cada vez mais. Brincando e aprendendo...brincando e aprendendo que eles vão gostar mais ainda.
2.Interagir é assim... é os alunos interagindo uns com os outros, né? Então eu não quero só participar só com aquele aluno, tem que ter interação entre eles todos, pra ter mais conhecimento. Por exemplo, eu faço uma dinâmica em dupla. Aí eles fazem um diálogo assim entre eles, na dupla. E um vai perguntar o nome, aí vai perguntar a idade, aí faz um diálogo, né? "what's your name," "my name is...," "how old are you?" Aí o outro responde. Então é um diálogo, aí todos interagem, todos aprendem, né? E também repetem as palavras que eu falo.

Episodes 1 and 2 in Table 6.21, above, have interaction as the main theme and show its relationships to the constructs of teacher cognition. Throughout, it is also possible to understand that the four constructs are interrelated in the text. The analysis also suggests that interaction is interpreted and

exemplified in the episodes, and Teresa positions herself in terms of teacher's responsibilities in relation to interaction and learning tools.

Generalisation occurs in relation to the teacher's roles, language use, and types of interaction. Teresa uses most of the discursive strategies to tell her story (e.g., generalisation, evaluation, shared knowledge, and articulation of students' voices). Both episodes begin with the idea of thought (*so, […] is this* and *that's interaction*) which gives the narrative a conversational tone.

She seems deeply engaged in her practice and concerned about her learners' development. Also, keeping her pupils happy to perform the classroom activities and motivated to learn seem to be important in her teaching. Thus, it can be assumed that Teresa constantly updates her methods and techniques to maintain her students' progress.

As in Natalia's narratives, the context seems to play an important role in Teresa's articulation. Because she teaches in two different schools (one regular and one full time school), sometimes it appears that her attitudes are a little divergent. However, the analysis shows that she tries to use similar EFL approaches in both contexts. Thus, it seems that Teresa needs to cope with similar classroom problems similar to those of Natalia. The analysis also suggests that Teresa understands the role of interaction in her practice and makes an effort to engage her students in meaningful interactive activities.

Teresa articulates teacher cognition by being unpretentious and casual in her narrative. Teresa's teaching, as seen in the analysis, resonates with Natalia's experience (i.e., a large number of students in class and limited teaching

resources) much more than with the PEC teachers'. Nevertheless, the difficulties do not seem to affect Teresa's motivation or attention to her students' needs, especially the younger ones. The episodes analysed here reflect the pleasure she wants to transmit to her students to help their learning in her classroom. In conclusion, in Teresa's practice, interaction seems to be mostly any moment students and teacher have fun and learn from each other.

6.5 Participant 8: Barbara

6.5.1 Barbara: background information and the data produced

Barbara is an inspiring professional who is engaged in helping her learners and developing her practice. She was very motivated to participate in the research process and although she is young, she has an earnest attitude in relation to EFL teaching in the public school system. She is demanding of her students, but at the same time, fosters a close relationship with them. Barbara's data analysis shows that she is well-informed about EFL teaching and learning, as well as determined to continue her education in the field. Showing her love for her profession and the English language and culture, she encourages her students to interact and learn with her.

Barbara had been teaching for about three years at the school I visited, but she has about ten years' experience in EFL teaching. She teaches teenagers and likes to create projects through which the students are able to use their

creativity and English at the same time. Her motivational attitude and her engagement in teaching are manifest throughout her narrative.

Barbara has a degree in English and attended several mini courses and workshops on topics related to EFL teaching. Her data production is mostly in Portuguese, but sometimes during the interviews, natural codeswitching occurred (as in Interviews 1 and 3) in her story. Sometimes, she shifts from L1 to L2, as in Narrative 2, when she chose to use only English. She participated in most of the stages of the research process, and gave an influential contribution to this study. Table 6.22 below shows all the data produced by Barbara.

Table 6.22 Information about the data generated by Barbara

Participant 8: Barbara					
Researchable Actions (RA)		**N. of words**	**Mode**	**Lang.**	**Main focus / notes**
0	**1ST contact**	✓	S	L1	1st meeting with teacher at the public school, talking about procedures and paperwork.
1	**Interview 1**	6,022	S	L1/L2	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	**Narrative 1**	2,292	S	L1	Focus on teacher's experience and specific interactive activity in the classroom. Introducing 'teacher Maria' prompt.
3	**Interview 2**	4,483	S	L1	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	**Narrative 2**	156	W	L2	Focus on teacher's experience, responding to 'teacher Maria' new prompt, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
5	**Interview 3**	5,210	S	L1/L2	Focus on problems in the classroom related to interaction, use of L1, and relationship teacher-students. Referring back to Interview 2.
Total		18,163			
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the public school after a group discussion.					
Key: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

As seen in Table 6.22, Barbara gave a lot of time to the research process, participating in most of the researchable actions. Her contribution was prolific and she produced long episodes of narrative. She demonstrated clear and straightforward articulation and, as with Natalia and Teresa, her work environment seems to have a strong influence on her classroom activities.

Barbara was eager to talk about her practice and expected to enhance her own development as an EFL teacher from the reflections she made during the fieldwork. The analysis shows that her articulation has a different tone from that of the other two public school teachers. That may be because she has only taught at a school of excellence (refer to Section). Although she also had crowded classes, she seems to have had more support from the administration and more teaching resources than Natalia and Teresa. In addition, she was able to develop projects in the school which engaged her learners in the process.

I present the analysis of Barbara's articulation of the four constructs of teacher cognition, their relationships to interaction and the emerging strategies, below.

6.5.2 Barbara's articulation of knowledge

Barbara's personal practical knowledge and experience in the public schools emerged from her narrative. The analysis shows how Barbara gives several explanations and examples to illustrate her point of view. In the episode below, for instance, Barbara offers a definition of interaction and talks about the problems which she is used to dealing with because of her individual

approach to students. This long episode offers a detailed reflective narrative of teaching routines.

> I think that interaction… it has to mainly prioritise...student learning, because, it is like that, I know some teachers who give students many activities and give them candies and think this is to interact. I joke about it, né? Because I don't give candies to students for about two years now. I stopped because every activity I have, everything I do, including my relationship with students…I cannot do as in a psychological experiment. The guinea pigs get used to being rewarded and you wave the flag, né? So, to me interaction is to put the methodologies together and prioritise student learning. If you are going to reward them later (…) I don't know. To me interaction is to put the methodologies together to improve learning, but without creating any bad habit, any methodological bad habit that you say, 'look, students are only doing this if I give them candy, otherwise they won't do it.' No. Two years ago I stopped it. Sometimes I am tempted (…) but I stopped to do it because I had some experiences in which students looked at me and 'Teacher, do you have candies?' 'Teacher, do you have lollipops?' And I stopped doing that and I… 'No. I think I am spoiling them', because the main objective is for them to learn, né? So, to me, the main objective is to use the methodologies in favour of their learning. (Barbara, Int. 1)

Original version: Eu acho que a interação, ela tem que priorizar... o aprendizado do aluno principalmente, porque, é assim (...) eu conheço alguns professores que fazem muita dinâmica, dão muito bombom e acham que isso é interagir. E eu até brinco, né? Que fazem dois anos que eu não dou um bombom pra um aluno. Eu parei porque todas as minhas dinâmicas, tudo que eu faço, inclusive esse meu relacionamento com os alunos... eu não posso fazer como na psicologia. Você acostuma os ratinhos a ganhar um prêmio e faz disso uma bandeira, né? Então, pra mim a interação é você juntar as metodologias e priorizar o aprendizado do aluno. Se você vai fazer isso depois com algum prêmio (...) Não sei. Pra mim a interação é você juntar as metodologias pro aprendizado, mas sem criar nenhum vício, nenhum vício metodológico que você diga assim, 'olha os alunos só vão fazer se eu der um bombom, senão eles não vão fazer.' Não. Tem dois anos que eu aboli, isso. Às vezes eu ainda fico assim tentada. (...) mas parei de fazer isso porque eu tive algumas experiências que os alunos olhavam pra mim e "professora, tem bombom?" "professora, tem pirulito?" E eu parei com isso, e eu "não...eu acho que tô acostumando eles muito mal." Porque o objetivo principal é eles aprenderem, né? Então pra mim, o objetivo principal é juntar as metodologias em prol do aprendizado deles. (Barbara, Int. 1)

The underlined utterances in the episode above represent Barbara's articulation of knowledge. She places student learning as a priority in her practice and her actions have learning as the teaching goal. Barbara's articulation suggests that her past actions (e.g., giving candies to students as a reward) have been reflected upon and she is able to talk about them, give explanations and examples, find solutions, and change her attitude towards her former routine. Table 6.23 offers the relationship between knowledge and interaction in the analysis of Barbara's episode.

Table 6.23 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
I think that **interaction…** it has to mainly **prioritise...student learning**	priorities	defining interaction
To me interaction is to **put the methodologies together** to improve learning, but **without creating any bad habit**, any methodological bad habit that you say, 'look, students are only doing this if I give them candy, otherwise they won't do it	methodologies and teacher's roles	defining interaction positioning towards bad habits
because the **main objective** is for them to **learn**, né? So, to me, the main objective is to **use the methodologies** in favour of their learning	the goal of interaction	positioning towards the use of appropriate methodologies

As noted in Table 6.23, Barbara interprets interaction (*prioritise student learning* and *put the methodologies together)* and positions herself in relation to the teacher's roles. The analysis suggests that Barbara is aware of her role of balancing activities and looking for the right methodologies to keep her students on the path to learning. Barbara's personal practical knowledge is evidenced in the ways she reaches out to her students and keeps them intrinsically motivated (because she stopped giving them rewards). In van Lier (1996, p. 108), the idea of intrinsic motivation is referred to as emerging "psychological needs which are innate in the human being." Thus, Barbara would rather stimulate students' needs, or *drives* as seen in van Lier (ibid.), than to continue using extrinsic motivational tools (e.g., candies).

The connection she makes between the definition of interaction and the guinea pig experiment indicates a concern about teachers' general understanding of cause and consequence. She explains that other teachers think this exchange (activities for candies) characterises interaction, but she passed on from this phase two years ago. Since her awareness was then raised from her experience and her attitude has changed. Barbara also uses

some discursive strategies in her narrative which makes her story thought-provoking (see Table 6.24).

Table 6.24 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Evaluation	it has to **mainly** prioritise give students **many** activities the **main objective** is for them to learn the **main objective** is to use the **methodologies** put the **methodologies** together put the **methodologies** together
Shared knowledge	I joke about it, **né**? **you** wave the flag, **né**? objective is for them to learn, **né**?
Articulation of students' voices	'**Teacher**, do you have candies?' '**Teacher**, do you have lollipops?'
Articulation of teacher's voice	'**look**, students are only doing this if I give them candy, otherwise they won't do it.' '**No**. I think I am spoiling them'
Uncertainty	**If** you are going to reward them later (…) **I don't know**. **if** I give them candy
Generalisation	The guinea pigs **get used to being rewarded**

Barbara's use of repetition can be coded as evaluation because it emphasizes the teacher's ideas she wants to make sure the researcher-as-listener understands. As seen in the other participants' narratives, shared knowledge is made mainly marked by *né?* which in the case of the utterances marked can be translated as both *you know* and *right* (e.g., *you wave the flag,* ***né?*** (*Right*? or *You know*).

The articulation of teacher and students' voices occurs in different ways. Up to now most of the participants have articulated the classroom voices as a dialogue between teachers and students. In this episode, Barbara presents her students voices in direct speech (as in '*Teacher, do you have candies?*'), but her own voice sounds like a thought (e.g., '**look**, the students are only doing this if I give them candy, otherwise they won't do it.' and '**No**. I think I am spoiling them'). Barbara is not talking to the students but to herself. The underlined utterances identify the use of *I* as the teacher scolding herself for her actions and the consequences which emerge from them. This type of

articulation of teacher's thought is also seen in Lidia, Flora and Leonor's data (see Sections 5.4, 5.5, and 5.6).

The analysis indicates that Barbara's articulation of knowledge is not expressed in elaborated academic terms, but touches upon a controversial topic in EFL teaching, that is, rewarding students. Her decision to stop rewarding them resonates with the view that this type of extrinsic student motivation in the classroom can affect learning in negative ways, as Brown and Lee (2015, pp. 72-73) point out. The analysis suggests that Barbara's knowledge helped her to deal with the problem.

6.5.3 Barbara's articulation of thought

The episode in Section 6.5.2 was analysed in relation to beliefs, but several utterances could just as well be interpreted as articulation of thought. For example, when Barbara says, *look, students are only doing this if I give them candy* and *No. I think I am spoiling them*, these utterances can be interpreted as if the teacher articulating her voice as thoughts, as does Leonor (see Section 5.6.5). In the episode below, the analysis shows that Barbara's articulation of thought emerges from various perspectives, including the one presented in these two examples above. She is talking about a problem she had in class and the solution she found in her practice. This narrative is a response to the 'teacher Maria' prompt about an activity which did not work well.

> Well, an activity which did not work…I think it was once with count and non-count, which is very complicated for them at first, né? So, they had terrible doubts about count and no-count. I think I spent three to four classes explaining from zero because I had noticed that they had not understood well, né? (…) And what did I do? I had breakfast with them (on a Saturday class).

> Then, when we were there I… 'Want to know something? I'm going to do something practical, so that they can understand it, né?' So, for breakfast they brought all the items I asked for, and then I would show them. I would cut the slices and say 'a slice of…' Then, things got better, much better. (Barbara, Narr. 1)

Original version: Olha, uma atividade que não tenha dado certo mesmo... eu acho que foi uma vez com *count and non-count* que pra eles o primeiro momento é bem complicado, né? Aí eles ficaram muito em dúvida do count and non-count. Eu acho que eu passei umas três ou quatro aulas. Aí eu explicava tudo do zero...Porque eu tinha percebido que eles não tinham entendido direito, né? (...) E o que eu que fiz? (...) eu fiz um café da manhã com eles (na aula de sábado). Aí na hora assim eu... "Quer saber de uma coisa? Eu vou fazer uma coisa mais prática pra eles verem, né?" Aí o café da manhã, aí eles levaram todos os itens que eu pedi, aí eu ia mostrando. Ia cortando os pedaços e ia falando *a slice of*... Aí melhorou. Melhorou bastante (Barbara, Narr 1)

In the analysis, the whole episode above was considered as an extended thinking episode with specific utterances which function as extracts of thought (the underlined utterances). These extracts can be interpreted from two different perspectives: the teacher expresses her thought first as a talk to the researcher-as-listener, telling a story in the past; then, she uses direct speech and the present tense (e.g., *'I'm going to do something practical'*) to articulate her thoughts as she retrieves the moment from memory. This latter resonates with the examples presented at the beginning of this section.

Table 6.25 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
Well, an **activity** which did not work…I think it was once with **count and non-count**, which is very **complicated** for them at first, né?	an activity based on a difficult grammar topic for students	positioning towards a problem with interaction
So, they had terrible **doubts** about count and no-count. I think I spent **three to four classes explaining** from zero because I had noticed that they had not understood well,	a way to solve the problem	exemplifying teacher's actions to reach interaction
'Want to know something? I'm going to do something **practical**, so that they can understand it, né?' So, for breakfast **they brought all the items** I asked for, and then I would show them. I would cut the slices and say 'a slice of…	a practical solution to the problem	positioning towards a solution exemplifying the activity

Interaction is not directly mentioned in Barbara's narrative, but her attitude to her students' difficulties suggests she understands the need to solve the

problem she talks about. The analysis suggests that the breakfast task became an exciting interactive moment to help students learn from *realia* and/or from the teacher's stimuli. In brief, realia are objects from everyday life which can be used as teaching resources. They can be just representations of real objects (e.g., toys such as a car, a truck, or a bus to teach about transport) or the object itself (e.g., the food items students took with them to Barbara's class) (Brown & Lee, 2015, p. 234). Barbara also used some discursive strategies to articulate thought (see Table 6.26 below).

Table 6.26 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	which **is** very complicated for them at first
Shared knowledge	very complicated for them at first, **né?** so that they can understand it, **né?**
Evaluation	**very complicated** for them at first they had **terrible** doubts things got **better**, **much better**
Articulation of teacher's voice	And what did **I do**? '**Want** to know something? **I'm** going to do something practical, so that they can understand it, né?' 'a slice of…
Articulation of students' voices	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

From Table 6.26 and as noted at the beginning of this section, Barbara's articulation of her teacher's voice emerges as a thought she had transported in time (e.g., *And what did I do?*) as she is articulating her voice which occurs as thoughts through. The analysis demonstrates that thought in Barbara's narrative has the characteristics of knowledge and beliefs, as well as of decision-making.

6.5.4 Barbara's articulation of beliefs

The episode below was selected to show the articulation of beliefs in Barbara's narrative and show the way she positions herself in regard to the

various problems she experiences in her teaching context. During this interview, Barbara decided she should speak English because it was a good opportunity (because she had the researcher to talk with in L2). Therefore, this episode was originally produced in English. Barbara uses a fairly informal language, with several pauses and repetition of her utterances. She was asked to talk about the issues which triggered her reflections about interaction and her practice.

> Sometimes when they're not paying attention and they want to listen to music or they want to go away or… ahnn… even with those students who are so smart, but they say 'Teacher, I hate English'… They block themselves to English classes, and sometimes they are really good at other subjects… with other teachers. They are so good at Math, they are so nice at chemistry, but when it comes to English, they… they block themselves. (…) This kind of thing disturbs my classroom. And disturbs me personally… disturbs me a lot because I need everybody's attention. I'm the kind of teacher who always needs the student to participate in my classroom. And sometimes they are sooo bored and I think to myself… Is it my fault? And I try to rethink all the things that we do (…) when we have an event in our school, for example, and we have music and we have different people here and students, they 'Ah, teacher'. They get amused and 'Teacher, what is that?' They do not pay attention because we have an event in our school. And it disturbs me a lot. This year it's better, but last year… we teachers, we suffered a lot. Because everybody wanted to come here to have a conference, to have celebrations (…) we couldn't participate and they disturbed us. (Barbara, Int. 3)

The underlined utterances represent some of the beliefs which Barbara articulates in her narrative. The analysis suggests that in Barbara's view, when her students are not interested in learning English they get distracted by any other events happening at the time of the class and this disturbs her and the development of her class. The analysis shows that Barbara believes that these interferences deeply affect her practice. Although she does not explicitly mention interaction in this episode, Barbara discusses the problems she faces to reach an appropriate teaching rhythm.

Table 6.27 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
when they're **not paying attention** and they want to listen to music or they want to go away or… ahnn… even with those students who are so **smart**, but they say 'Teacher, I hate English'…	even smart students get distracted in class	positioning towards problems which hinders interaction in the class
They **block themselves to English** classes, and sometimes they are really good at other subjects…	students do not want to participate	identifying one of the problems
sometimes they are sooo **bored** and I think to myself… Is it **my fault**? And I try to **rethink** all the things that we do	teacher needs to identify the problem and find a solution	reflecting about possible solutions

Table 6.27 gives examples of the relationships between the articulation of beliefs and interaction. The analysis shows that the teacher's position in relation to problems in her classroom. As mentioned, the teacher is not describing a specific activity, but discusses the problems which hinder interaction and learning. Some of the issues Barbara talks about are inherent in her own context (events taking place in the school) and as seen in Teresa and Natalia's narratives this type of problems affects their teaching.

Table 6.28 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	They **block** themselves to English classes sometimes they **are** really good at other subjects This kind of thing **disturbs** my classroom
Evaluation	students who are **so smart** they are **really good** at other subjects They are **so good** at Math… **so nice** at chemistry they are **sooo bored** we teachers, we suffered **a lot**
Articulation of teacher's voice	Is it **my** fault?
Articulation of students' voice	Teacher, **I** hate English Ah, **teacher** **Teacher**, what is that?
Uncertainty	Is it my fault?
Shared knowledge	No apparent occurrences in this episode.

In this episode, the articulation of the teacher or students' voices emerges from the text with the students complaining (*Ah, teacher*) and the teacher reflecting (*Is it my fault?*). Once again Barbara uses this strategy of articulating her teacher's voice as a thought. Finally, the analysis suggests

that the question she asks herself can also be taken as evidence of uncertainty of her own roles and purposes in a class.

6.5.5 Barbara's articulation of decision-making

Barbara's decision in the classroom is clearly articulated. In the episode below she explains how she tried to use the four skills (listening, speaking, reading and writing) in her class and how she relates them to interaction. She describes a lesson in which she explored listening and reading. She talks about teacher and students' actions and the context.

> There was a text about 9/11, né? So, we…actually the unit was about violence. I gave them 10 minutes to read before…Because, in fact, I do that, I ask them to answer the unit and only then I make corrections. When I did it differently, they only wanted to hand it in when I gave them the correct answers. So, I make the opposite, I ask them to do it and then I make corrections (…). Then, I gave them 10 minutes so they could read again – because they had already answered the exercise, né? Next, I played the audio and did the reading comprehension with them. The reading comprehension we do here [at the public school] is different from the one we have in the private English course. There you can ask students not to translate, but here you cannot make such a demand, né? Here we end up doing the translation of the whole text. Because if you don't do it, they won't understand it…you are really deceiving the kids. (Barbara, Narr. 1)

Original version: Tinha um texto sobre o atentado de 11 de Setembro, né? Aí a gente... a unidade, na verdade, falava de violência. Aí eu dei uns 10 minutos pra eles lerem antes... Porque, na verdade, eu faço assim, eu peço pra eles fazerem a unidade e depois que eu corrijo. Porque quando eu fazia ao contrário, ele só queriam entregar, quando eu desse a resposta. Então eu faço ao contrário, eu mando eles fazerem e depois que eu corrijo, (...) Aí eu dei uns dez minutos pra eles lerem de novo o texto – porque eles já tinha respondido o exercício, né? Aí eu depois eu coloquei o áudio (...). Aí eu fui fazendo a compreensão textual com eles... porque assim, a compreensão textual que a gente faz aqui, é diferente da que a gente faz no cursinho. Porque no cursinho você pode exigir que o aluno não traduza, mas aqui você não pode fazer exigência, né? Aqui você tem que... acaba tendo que fazer a tradução do texto todo. Porque se você não fizer, eles não vão entender... você tá enganando mesmo os meninos.(Barbara, Narr 1)

This episode shows a sequence of decisions, some of which are apparent, and others more subtle. For example, when Barbara talks about the text, it is implicit that she might have prepared her lesson prior to the class. The underlined utterances represent the actions which come from teacher's decisions (e.g., to give the students time to read, play the audio tape, and so

on). In this reading/listening activity it is not clear how and when the students interacted with each other, but some interaction with the teacher is implied because she corrects, checks the exercises, and helps the students.

Table 6.29 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
I **gave** them **10 minutes** to read before…Because, in fact, I do that, I **ask** them to answer the unit and only then I **make corrections**.	to give students time to read, answer the questions and correct the exercise	explaining reading/listening activity
I gave them **10 minutes** so they could **read again** – because they had already answered the exercise, né? Next, I **played** the **audio** and did the reading **comprehension** with them.	to give students time to read again and answer the comprehension questions	exemplifying procedures to activity
we end up doing the **translation** of the whole text	to translate the text	positioning towards L1/L2

Table 6.29 shows some examples of decision-making as articulated by Barbara. It can be assumed that there are moments when the students interact with each other, although this is not evidence in the text. Interestingly, Barbara's narratives describes procedures and actions, but the idea of interaction is vague, or not clearly defined. The episode presented here was selected because it had this characteristic which is consistent in Barbara's articulation of the constructs of teacher cognition.

Table 6.30 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Shared knowledge	a text about 9/11, **né?** answered the exercise, **né?** There **you** can ask students not to translate
Uncertainty	**if** you don't do it, they won't understand it
Generalisation	The reading comprehension we **do** here **is** different … There you **can ask** students not to **translate**
Evaluation	No apparent occurrences in this episode
Articulation of teacher and students' voice	No apparent occurrences in this episode.

Table 6.30 above shows that shared knowledge emerges with the use of *né?* and the impersonal *you*. As noted before in Eduardo and Lidia's narratives, the generic *you* is used to mean people in general and is a way of including the listener in the story or conversation. In Barbara's case, generalisation is mainly concern the private and public school situations. Decision-making is evident in her articulation, as the analysis suggests, and the actions indicate decisions made prior, during and perhaps post class.

6.5.6 Discussion of Barbara's data analysis

The analysis suggests that Barbara's teaching experience in the public school has affected her attitude towards interaction and student participation, but interaction does seem to occur in Barbara's classroom. However, in her articulation of the constructs of teacher cognition, interaction is not explicitly discussed, but is suggested. She also uses some of the discursive strategies in a particular way (e.g., her articulation of teacher's voice and thought). Table 6.31 presents the analysis developed from an inclusive perspective, that is, considering all the themes explored in the current study.

Table 6.31 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. TO MY STUDENTS, **I AM THE MOST ANNOYING TEACHER IN THE WORLD** AND THEY NOTICE WHEN I AM LIKE THAT, when I demand a lot from them. But when this moment passes, there is the time it comes like that: 'Teacher, I will do the assignment, but I want to have some help. Could you stay with me Monday after class just to teach me these words?' So, **I do like that**, I demand, but I also give them support. (Barbara, Int. 1)	Positioning (teacher's roles and students' needs)	Generalisation (annoying teacher) Evaluation (a lot) Articulation of students' voices
	2. If your students are going to accept because they understand that when you work the four skills that you're trying to be a star teacher. Just because you speak English, to speak the way you (...) I can't do that. (...) **I'M FREE TO CHOOSE AND I DON'T WANT TO DO THAT**. And sometimes they do not understand that **English is not something that is different, is something that is demanding to do in business nowadays.** And I have to make them understand it. **It's so hard for me**. But **I love to teach English** anyway and if I change my position as I intend to change it, it's not because I don't like teaching. It's because **I need to feel comfortable with my job and sometimes I can't just because of that. But I love English**. (Barbara, Int. 1)	Positioning (about L1/L2, teaching and teacher's roles) Exemplifying types of activities (using the four abilities)	Generalisation (English is different) Shared knowledge (impersonal *you*) Evaluation (star) Uncertainty (if-clause)
	3. It was Friday. I was teaching personality traits and…but **WE COULD DO IT BECAUSE THERE WERE FEW STUDENTS IN CLASS**, né? – You can see how the number of students interferes in our class. The class I developed this activity has 46 students. Friday, BECAUSE OF THE WORLD CUP, ONLY 20 SHOWED UP. So, because I was already working the personality traits…(…) So, I got the adjectives which were in the textbook, né? I wrote them on the board and I gave them post-it paper, which I had in my purse, so we trained, clarified the doubts. 'What's selfish?' then I explained (…). I wrote 30 [adjectives]. Then I asked them to try the pronunciation. After they understood well I asked them to write on the post-it paper which personality traits they had. (Barbara, Int. 3)	Exemplifying interactive activity Positioning towards context and teaching conditions	Generalisation (few students and cup) Articulation of teacher's voice Shared knowledge (né?) Evaluation (only)

Original versions
1. Sou a professora mais chata do mundo pra eles e eles percebem quando eu tô assim, que eu tô cobrando muito, mas quando passa aquele momento, na hora parece que surge assim, "Professora, eu vou fazer o trabalho, mas eu queria que a senhora me ajudasse. A senhora pode ficar segunda-feira comigo aqui depois da aula pra senhora me ensinar essas palavras?" Então, eu faço assim, eu cobro, mas eu também dou apoio a eles.(Barbara, Int. 1)
2. Originally produced in English by participant.
3. Foi sexta-feira. Eu tava ensinando personality traits, e aí... Mas deu pra fazer essa atividade porque tinha pouco aluno também, né? Pra você ver como interfere diretamente a quantidade de alunos na nossa aula. A sala que eu fiz essa atividade, ela tem 46 alunos. Na sexta-feira, porque como tá esse clima de copa, apareceram 20 alunos. Aí como a gente tava estudando *personality traits*, (...)Aí eu peguei os adjetivos que tavam no livro, né? Aí coloquei no quadro, aí dei um post-it pra cada um, que eu tinha na minha bolsa, aí a gente treinou, tirou dúvida de cada um... "Que que é selfish?" (...) aí fui explicando. (...) Coloquei 30. Aí eu pedi, aí a gente treinou a pronuncia, depois que eles tiraram dúvidas direitinho eu pedi pra eles escreverem no post-it, quais são os adjetivos de personalidade que eles tinham. (Barbara, Int. 3)

Table 6.31 above shows that the interconnections between the constructs in Barbara's production are similar to those of the other public school participants' (Natalia and Teresa). However, interaction is not explored in Barbara's episodes as a primary topic and it can only be assumed that interaction works at a background level, perhaps because of the number of students. For example, when describing the personality traits activity in episode 3 (above), Barbara explains that the activity was only possible because there were fewer students in class (see Table 6.31).

In addition, it can be noted that in the episodes analysed above the focus was on the teacher (teacher's roles, actions and problems) and on the context (crowded classes). The focus on students appears in relation to both (teacher and context). Barbara shows her motivation and *love* for the language and the profession, which seems to influence her actions. Discursive strategies emerge in all the episodes in different ways, but not all the episodes include all the strategies.

The analysis suggests that Barbara is usually very direct in her articulation of teacher cognition. Interaction does not emerge as the main theme in her narrative because, in her narrative, she shifts her attention to the students, their problems, and their actions. For example, she mentions the events of the World Cup of football which happened in the city. According to the public school teachers, the Cup interfered with the school timetable because of the students' poor attendance.

In her episodes, Barbara shows concern for her students' wellbeing and the problems in her practice which she is constantly trying to solve. The teaching

context she is in appears to have a strong impact in her teaching and she shows she is aware of that. Finally, her voice emerges in an intense way, generating strong and straightforward narratives.

6.6 Participant 9: Nina

6.6.1 Nina: background information and the data produced

Nina is an experienced professional who is constantly developing projects and accepting challenges to improve her practice and improve her students English language skills. She was interested in participating in the research process to give her contribution to EFL teaching in Amazonas. Her dedication to teaching is clear when she talks about her students and her practice. Nina's narratives suggest she has a caring but demanding attitude in the classroom and a pleasant relationship with her learners.

Nina's data analysis suggests that she is knowledgeable about EFL teaching and her 16-year experience in the field adds to her academic education. She has a degree in English and invests in her career by attending local workshops and courses. Nina has been teaching in the public school system for about seven years and is passionate about her work. She teaches teenagers and young adults in a public school and tries to motivate her students, especially the underprivileged ones, to improve inside and outside the classroom, to have a better education.

Nina only started her participation in the research process in the middle of the semester, but she tried to follow the research process whenever possible.

Table 6.32 shows her production in number of words. She participated in four of the researchable actions and for this reason her production was not as prolific as that of other teachers. However, as an experienced teacher her voice was valuable to the current study and her data analysis is here included.

Table 6.32 Information about the data generated by Nina

Participant 8: Barbara					
Researchable Actions (RA)		**N. of words**	**Mode**	**Lang.**	**Main focus / notes**
0	**1ST contact**	✓	S	L1	1st meeting with teacher at the public school, talking about procedures and paperwork.
1	**Interview 1**	2,150	S	L1	Focus on teacher's academic and professional background, relationship with students, first understandings of classroom interaction, and the use of L1 in the classroom.
2	**Narrative 1**	267	W	L1	Focus on teacher's experience and specific interactive activity in the classroom. Introducing 'teacher Maria' prompt.
3	**Interview 2**	5,059	S	L1	Focus on teacher's experience, clarifying points exposed in Narrative 1, talking about classroom interaction, students and teacher's roles, and classroom language.
4	**Narrative 2**	127	W	L1	Focus on teacher's experience, responding to 'teacher Maria' new prompt, clarifying points exposed in Interview 2, and discussing specific problematic moment in the classroom.
Total		7,603			
Obs.: The modes and languages marked in this table represent the main choice of delivery, but participant makes use of codeswitching whenever she feels appropriate.					
* Total number of words produced in the public school after a group discussion.					
Key: **Int**.= interview **Narr**.= narrative **S**= spoken mode **W**= written mode; **Lang**.= language used by participant **L1**= Portuguese **L2**= English					

Table 6.32 shows that Nina chose to use Portuguese in her production of data and, as happened with other participants, her spoken contribution was more prolific than her written. The following sections offer the analysis of Nina's contribution to the fieldwork.

6.6.2 Nina's articulation of knowledge

As seen in the analysis of previous participants, personal practical knowledge (or PPK) is evident in the narratives through the use of specific

metalanguage which refers to EFL teaching methodology. In Nina's data analysed, for example, she articulates knowledge similar to that of the other public school teachers. In the episode below, Nina talks about the use of the target language (English) and students' attitude towards interaction in the classroom.

> It's difficult. It's what I am saying, they create a barrier. When I ask them to present an assignment, I have to write how they are going to present. (…) They don't have...ahnn…autonomy to say like that 'Hi. Good morning.' 'Good evening.' 'Good afternoon, my name is…' No. they say like that, 'How's this **teacher**.' 'How is that?' **Teacher**, is this right?' *Né*? They don't know how to do it, make mistakes to learn. They need to ask to know if it is right. If it is not, they go, go, go, and 'And if it is wrong?' 'Present the way you think it should be.' Then, when I speak English, they, 'Ahn.' 'What?' Then I start to do it (…) when I arrive and I have a headache I say '**Class, quiet please***.* I have a terrible headache**.**' Then they understand, because I do mimicry so they can learn (…). They are too shy to speak, I think. They are ashamed. They are afraid of making mistakes and the peers laughing at them, something like that, né? (Nina, Int. 1)

Original version: É difícil. É como eu tô te falando, eles botam uma barreira. Quando eu boto pra eles apresentarem trabalho, eu tenho que escrever, como que eles vão apresentar. (...) Eles não tem assim... é... autonomia de chegar assim 'Hi. Good morning.' Good evening.' 'Good afternoon, my name is...', Não. Eles já dizem assim, 'Como é que é, teacher?' 'Como é que é?' 'Teacher tá certo assim?', né? Eles não... não fazem assim pra errar e aprender. Eles tem que perguntar pra saber se tá certo. Se não tiver eles vão, vão, vão e 'mas se tiver, errado?', 'apresenta do jeito que você acha que é'. Aí quando eu vou falar em inglês, eles 'hã, o que?'. Aí eu começo a fazer (...) quando eu chego assim, que eu tô com dor de cabeça eu digo 'class, quiet please. I have a terrible headache'. Aí eles entendem, porque eu já vou fazendo tudo assim na mímica pra eles poderem aprender (...) Eles tem vergonha de falar, eu acho. É mais vergonha. Eles tem medo de errar e os colegas rirem, alguma coisa assim, né? (Nina, Int. 1)

The underlined utterances in the episode above highlights the evidence of teacher knowledge in Nina's narrative. Nina is well-informed about the difficulties of teaching language in the public school context. For example, she appears to be aware that students *create a barrier*, do not have *autonomy*, and *are afraid of* taking risks although she tries to motivate them to learn. The utterances in bold represent the codeswitching made by Nina in her narrative. Although she narrates in Portuguese, Nina uses the terms *teacher* and *class be quiet, please* in the target language. Table 6.33 below

shows the relationships between knowledge and interaction in Nina's episode.

Table 6.33 Articulation and interpretation of knowledge

Teacher's articulation of knowledge	Teacher is knowledgeable of (notice the bold terms and phrases)	Teacher shows the relationships between knowledge and interaction by
It's **difficult**. It's what I am saying, they create a **barrier**. When I ask them to **present an assignment**, I have to write how they are going to present.	the difficulties students have to learn a foreign language and the actions to help them	positioning towards the problems to have interaction
They don't have...ahnn…**autonomy** to say like that 'Hi. Good morning.' 'Good evening.' 'Good afternoon, my name is…' No. they say like that, 'How's this teacher.' 'How is that?' Teacher, is this right?' *Né*? **They don't know how to do it**, make mistakes to learn.	students do not have autonomy to start a conversation with the language they learn in the classroom	exemplifying the types of interaction students could have if they took risks positioning towards students' attitudes
Then they **understand, because I do mimicry** so they can learn (…) They are too shy to speak, I think. They are ashamed. They are **afraid of making mistakes** and the peers laugh at them, something like that, né?	techniques which can motivate students to learn	defining possible actions to help interaction to happen positioning towards students' problems

As seen in Table 6.33, Nina mainly discusses the problems students have to interact in the target language. The analysis shows the positions she takes towards the difficult problems and tries to find effective solutions (e.g., writing instructions on the board and using mimicry). In Nina's episode, interaction is not clearly described or defined. In other words, the teacher exemplifies the possible interaction she expects from students, but it is not clear whether it happens in the classroom. Table 6.34 offers examples of the emerging strategies used by Nina.

Table 6.34 Discursive strategies in the interpretation of knowledge

Emerging themes	Examples
Generalisation	**It's** difficult. They **don't have**…autonomy They **are** too shy to speak, I think. They **are** ashamed. They **are** afraid of making mistakes
Evaluation	It's **difficult**. If it is not, they **go, go, go**
Shared knowledge	something like that, **né?** is this right?' ***Né?***
Articulation of students' voices	**'Hi.** Good morning.' 'Good evening.' 'Good afternoon, **my** name is…' 'And **if it is wrong**?' '**Ahn**.' 'What?'
Articulation of teacher's voice	'Present the way **you** think it should be.' '**Class**, quiet please. I have a terrible headache
Uncertainty	They are shy to speak, **I think**.

Table 6.34 shows that Nina articulates both teacher and students' voices and create a micro-dialogue in which teacher and learners discuss the task. Nina's episode shows that PPK is evident in her narrative. She seems to be aware of the environment she is operating within, and the problems which she needs to foresee and solve to encourage student learning. For example, even though her students create a barrier, she tries to motivate them to improve their language learning.

6.6.3 Nina's articulation of thought

In the next episode, the analysis develops in relation to thought. Nina was asked to talk about the school environment and her relationships with peer teachers and students. She generalises about the topic, but also gives some details of interaction she organised for students which was enacted in front of the whole school community.

> It's like I said. Sometimes they [other teachers] say I want to show off, but that's how I learned from my previous coordinator in the other school. In my five years in the other school and the coordinator used to say that teachers need to show their work, né? Teachers need to make it and show it. And it's not worth it if you only do it in the classroom. The only people who will know about it are the students, né? So, I organise picnics. For example, I give them cake recipes – they learn and present the recipe in English – I bring a real cake, leave it there and we eat it

later. All that, né? I play a movie and students role play a scene, né? Last year our movie for the ninth year was Grease, three scenes of the film, né? Then it motivated the whole school and the other students ask me '**Teacher**, are we going to do it as we did last year?' And they look for another movie. (Nina, Int. 1)

Original version: É como eu falei, às vezes eles dizem que eu quero aparecer muito. Mas é porque eu aprendi a ser assim com o coordenador anterior, da outra escola. Foram 5 anos na outra escola e o coordenador dizia assim que o professor tem que mostrar trabalho, né? Ele tem que fazer e aparecer. E não adianta você fazer alí dentro da sala de aula. Quem vai saber alí são os alunos, né? Então eu faço picinic. Por exemplo, eu faço receita de bolo, eles apresentam toda a receita em inglês. Eu levo um bolo de verdade, o bolo lá e a gente faz aquele lanche depois. Tudo isso, né? Eu passo filme e eles fazem a cena do filme, né? Ano passado nosso filme do nono ano foi Grease, três cenas do filme, né? Aí motiva a escola toda e os outros alunos já me perguntam 'Teacher, vai ter igual ano passado?' E eles vão procurando outro filme. (Nina, Int. 1)

The episode above was analysed as an extended thinking episode, but also considered from the perspective of extracts of thought (the underlined utterances). The analysis shows that Nina's thoughts are about the activities she plans for students inside and outside the classroom. The term *teacher* (in bold) represents the codeswitching, as also seen in Nina's last episode. She also signals that there is a tension between her (the English teacher) and the other teachers in the school (e.g., *they say I want to show off*). Table 6.35 presents the relationship between thought and interaction.

Table 6.35 Articulation and interpretation of thought

Teacher's articulation of thought	Teacher thinks about (notice the bold terms and phrases)	Teacher shows the relationships between thought and interaction by
It's like I said. Sometimes they [other teachers] say **I want to show off**, but that's how I learned from my previous coordinator.	her engagement is important regardless of possible criticism	positioning towards her own beliefs about teacher's engagement
Teachers need to **make it and show it**. And it's not worth it if you **only do it in the classroom.** The only people who will know about it are the students, né?	showing the school how her students engage in extra-class activities	positioning towards actions and students' attitudes
So, **I organise picnics.** For example, **I give them cake recipes – they learn and present the recipe in English** – I bring a real cake, leave it there and we eat it later. All that, né? **I play a movie** and students role play a scene, né?	examples of activities which students are engaged in	exemplifying possible interaction

As seen in the analysis of previous teachers, Nina does not mention interaction directly, but it can be inferred from the activities she describes (e.g., picnic and movies) that interaction is part of, or the result of the activity.

Nina also reflects on her ability to help students engage in motivating activities to advertise these activities to the school community. Thus, the activities discussed in this episode can be considered as examples of interaction in Nina's practice. Table 6.36 offers the strategies used by Nina to articulate her thoughts.

Table 6.36 Discursive strategies in the interpretation of thought

Emerging themes	Examples
Generalisation	teachers **need to show** their work Teachers **need to make** it and show it.
Evaluation	**All that**, né? it motivates **the whole** school
Shared knowledge	The only people who will know about it are the students, **né?** All that, **né?** three scenes of the film, **né?**
Articulation of students' voices	'**Teacher**, are we going to do it as we did last year?'
Articulation of teacher's voice	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

In Nina's episode of thought generalisation occurs in the present tense and relates to the teacher's attitude towards her own practice. As happens in other Nina's articulation, shared knowledge is evident in the use of *né?* which implies the expectation that the researcher-as-listener agrees with or endorses the ideas being expressed. Once more, the term *teacher* is an example of codeswitching in the articulation of students' voices.

6.6.4 Nina's articulation of beliefs

The analysis of beliefs suggests that most of the beliefs articulated are based on knowledge and experience. In the episode below Nina talks about a reading comprehension activity she had developed in her classroom. The underlined utterances represent the examples of beliefs which emerged from the analysis.

> <u>They can do it. They can do it,</u> but then after two or three readings…Then I tell them to…I tell them to listen first and then say it, né? And when they

> don't know it…and they try to write the way they are hearing…because they want to speak together with me. I say. 'You can't learn like that.' I tell them, like that, when they are having reading exam, there are some words that I cannot accept they make mistakes, né? So when it's the 9th grade they have already…You know, I try to make them correct themselves by playing around, so that they do not feel embarrassed. Because when they are openly corrected, they create a barrier and don't want to say anything else. (Nina, Int. 1)

Original version: Conseguem. Conseguem, mas depois de umas duas ou três leituras... Aí eu falo pra eles... digo pra eles sempre escutarem pra depois falar, né? E quando eles não sabem... que eles tentam escrever do jeito que eles estão escutando...porque eles querem falar junto comigo. Eu digo, 'Vocês não vão aprender, assim'. Eu digo assim pra eles, quando eles tão fazendo teste de leitura, tem algumas palavras que eu realmente não aceito que eles errem, né? (...) Isso daí eu digo 'Não, de jeito nenhum. Nunca mais', né? Nem no 6° ano, eu já começo, né? Aí quando chega no 9° ano eles já (...) Sabe eu tento fazer eles se corrigirem levando um pouco na brincadeira pra eles não ficarem embaraçados. Porque quando eles são muito corrigidos, eles botam uma barreira e não querem dizer mais nada.

As seen in other participants' articulation of beliefs, in this episode it is possible to note three common relationships to the construct beliefs. The first relates to the general meanings which emerge from the utterances (e.g., *They can do it* and *Because when they are openly corrected, they create a barrier*). The second relationship refers to the construct knowledge already observed in other participants' narratives. The third relates beliefs to the idea of rationalising deduction, that is, beliefs that can sometimes occur in utterances which explain or rationalise a situation (e.g., *Because when they are openly corrected…*). Thus, it can be inferred that the teacher needs to be well-informed of her profession to articulate such beliefs (e.g., *they can do it*, *they create a barrier*, and so on). Table 6.37 shows the interrelation between beliefs and interaction.

Table 6.37 Articulation and interpretation of beliefs

Teacher's articulation of beliefs	Teacher believes (notice the bold terms and phrases)	Teacher shows the relationships between beliefs and interaction by
They can do it. They can do it, but then after two or three **readings**…Then I tell them to…I tell them to l**isten first** and then **say** it, né? And when they don't know it…and they try to **write** the way they are hearing	students are able to perform the task proposed	positioning towards reading activity exemplifying steps to interaction
I try to make them **correct themselves** by playing around, so that they **do not feel embarrassed**. Because when they are openly corrected, they create a **barrier** and don't want to say anything else.	teacher needs to know the right moment to correct students to avoid problems	positioning towards appropriate actions to improve learning and use of L2

The analysis shows that in this episode interaction is part of the storyline, but instead of being clearly stated, it is referred to vaguely. The assumption is that the reading activity (which includes the four skills: speaking, listening, reading and writing) proposed in Nina's episode can also become interactive. For example, when students correct themselves and Nina plays around in the class, these activities can be considered to have the potential to become interaction. Thus, if interaction does not occur among students it certainly happens with the teacher and students. Nina also positions herself towards the activity and the appropriate actions to avoid creating a *barrier* which hampers learning. The discursive strategies used by Nina are presented in Table 6.38.

Table 6.38 Discursive strategies in the interpretation of beliefs

Emerging themes	Examples
Generalisation	They **can do** it when **they are** openly corrected, they create a barrier and don't want to say anything else
Shared knowledge	listen first and then say it, **né?**
Articulation of teacher's voice	'**You** can't learn like that.'
Evaluation	when they are **openly** corrected don't want to say **anything else**.
Articulation of students' voice	No apparent occurrences in this episode.
Uncertainty	No apparent occurrences in this episode.

As happens in Nina's previous articulation, generalisation is evident in the use of the simple present tense and relates to the students' attitude. Shared

knowledge can be considered in the expression *né?* Articulation of her teacher's voice is noticeable when she draws the students' attention to procedures and attitudes.

6.6.5 Nina's articulation of decision-making

As noted earlier in this chapter, in narrative, decision-making emerges from the actions of both the teacher and students and indicates the teachers' choices made pre-, while and post-lessons. In this episode analysing decision-making, Nina describes an activity she developed for her students where they needed to prepare a model of a house and describe it.

[The activity] developed for about three classes. This one I gave them more time to work because they needed to make a model. So, we spent four classes. Then, when...yesterday in the presentation, they were very nervous. And they came with the mobile '**Teacher** is this the way we say that?' 'Is this the way I say, this is the house and this is the room?' 'In the bedroom there is…' Because I demanded at least three things, né? 'In the bedroom there is a bed, there is a television, and there is a wardrobe.' Then I say, 'Yes that's right.' Then, I try to accept what they say. (…) 'How's the demonstrative adjective – este, esta?' 'Is it ***this***?' Then I say, 'Yes, **this**.' So, I asked them to do the assignment. I gave them a sheet with a house and the numbered names of rooms. For example, the drawing of the house had a sofa and little blank square so they could fill out with the numbers. (...) Then, they made the model, né? And each student should talk about one of the rooms. (Nina, Int. 2)

> Original version: Foram umas três aulas. Essa, eu dei mais tempo pra eles porque eles tinham que montar a maquete. Então foram quatro aulas. Mas, assim, quando...foi ontem na apresentação foi aquele nervosismo e eles com o celular 'teacher, é assim que fala?', 'É assim que eu vou chegar e dizer essa é a casa, esse é o quarto?', 'no quarto tem...'. Porque eu exigi pelo menos três coisas, né? 'No quarto tem cama, televisão e guarda-roupa'. (...) Aí eu digo é 'tá certo'. Aí eu tento aceitar o que eles falam. (...) 'Como é o pronome demonstrativo – este, esta?', 'É this?'. Aí eu digo, é 'this'. Aí eu passei o trabalho, dei um outro papel pra eles como uma casa montada e embaixo os nomes de cada cômodo da casa e uma numeração. E que no desenho da casa tinha assim, por exemplo, um sofá e tinha um quadradinho em branco pra eles preencherem com os números. (...) Aí eles fizeram o modelo, né? Só que eles teriam que falar um de cada cômodo. (Nina, Int. 2)

The underlined utterances represent Nina's decisions, and the ones in bold denote the moments when there was codeswitching (e.g., the terms *teacher* and *this*). From the analysis, it seems that Nina planned the development of her class over about three to four days because of the large number of students in the class. The analysis identified different types of decision. For example, pre-class decisions are implied in the episode (e.g., the sequence

of students' actions and the instructions for the model) and the in-class decisions are more evident than the first (e.g., giving students more time to work, accepting what they say, and so on). No post-class decisions are mentioned in the episode. Table 6.39 shows the relationships between interaction and decision-making.

Table 6.39 Articulation and interpretation of decision-making

Teacher's articulation of decision-making	Teacher decides (notice the bold terms and phrases)	Teacher shows the relationships between decision-making and interaction by
I **gave them more time** to work because they needed to make a model. So, **we spent four classes**.	to give students enough time to prepare for the presentation	explaining time spent on activity
Because I **demanded at least three things**, né? 'In the bedroom there is a bed, there is a television, and there is a wardrobe.'	to give students specific instructions	exemplifying procedures to activity
So, I **asked them to do the assignment**. I gave them a **sheet** with a house and the numbered names of rooms. (...) Then, they **made the model**, né? And each student should **talk** about one of the rooms.	to gives the final instructions	explaining the steps to activity

As observed in Nina's other episodes, the notion of interaction is vague from the descriptions given by the teacher. Thus, Nina, the teacher explains several details of the activity but is unclear about the interactive moments. Nina also uses several discursive strategies in this episode (see Table 6.40 below).

Table 6.40 Discursive strategies in the interpretation of decision-making

Emerging themes	Examples
Evaluation	they were **very nervous**.
Shared knowledge	they made the model, **né?**
Articulation of students' voices	'**Teacher** is this the way **we** say that?' 'Is this the way **I say**, this is the house and this is the room?' 'In the bedroom there is…' 'How's the demonstrative adjective – este, esta?' 'Is it *this*?'
Articulation of teacher' voice	'In the bedroom there is a bed, there is a television, and there is a wardrobe.' 'Yes, this.'
Uncertainty	No apparent occurrences in this episode.
Generalisation	No apparent occurrences in this episode.

In this episode, Nina articulates the teacher and students' voices in a dialogue between them. Students ask for help and the teacher responds. In this interaction, there is codeswitching in the students' voices through the use of the term *teacher* and of the pronoun (*this*) in the target language (whilst the story is told in Portuguese). As happened in Nina's previous episodes, shared knowledge is evident in the use of *né?*

Nina's articulation of decision-making is made in a direct way. Nina mentions two types of decisions (pre and while). As occurred in the other public school teachers' articulation of the four constructs, the focus is on the problems in the classroom (e.g., crowded classes mean it takes longer to develop an activity). The next section shows the analysis of Nina's articulation of the four constructs altogether.

6.6.6 Discussion of Nina's data analysis

The analysis of the episodes presented throughout this section (6.6) indicate there was no specific interactive activity fully described. As happened in Barbara's narrative, the idea of interaction is so vague that it can only be assumed it exists. Table 6.41 presents an inclusive analysis of Nina's production.

Table 6.41 Understanding the analytical process

A	B	C	D
The four constructs	Examples	Relationships to interaction	Discursive strategies
Knowledge **Thought** BELIEFS Decision-making	1. **This happened in my 1st experience as a public school teacher**. IMAGINING THAT STUDENTS OF [THIS LEVEL] HAD ALREADY HAD A BASIS OF ENGLISH LANGUAGE, I planned a quiz about the same [as Teacher Maria's] subject 'likes and dislikes'. First, in order to students understand I had to explain everything in Portuguese. Then, after the explanations we started the activity. I tried all the ways, using mimicry, using other vocabulary so they could understand it in English. **Some of the students could assimilate it while most of them could not.** Finally, not to waste the whole class, I asked the questions in English combined with mimes and the students who could understand it would answer in Portuguese to the others. THIS WAY WE COULD UNDERSTAND EACH OTHER. **IN THE END IT WAS AN EXCITING CLASS BECAUSE THEY COULD UNDERSTAND THE DYNAMICS, NOT AS EXPECTED, BUT THEY WERE ABLE TO ACCOMPLISH THE TASK.** (Nina, Narr. 1)	Positioning (fixing a problem in interaction and L1/L2) Exemplifying interaction Defining an accomplished task	Evaluation (all the ways, most of, whole, exciting)
	2. Using the song 'Let it go', I planned a listening activity in which the students had to complete the lyrics. BECAUSE IT IS A CURRENT SONG THAT IS ON THE MEDIA, MOST OF THE STUDENTS GOT IT RIGHT WITHOUT ANY DIFFICULTIES. I only had to write on the board randomly the words that were missing. The first time they listened to it, they had no paper and they only need to identify the words on the board. After I handed in the song activity, I played the song 3 times, and **some students had already completed the task in the first time**. **AFTER THIS ACTIVITY, THE STUDENTS SANG THE SONG HAPPILY BECAUSE THEY HAD MADE IT ACCURATELY**. (Nina, Narr. 2)	Positioning (about effective activity) Exemplifying type of activity (song)	Generalisation (students got it right) Evaluation (most of, only, happily, accurately)
	3. T**HE DIFFERENCE BETWEEN INTERACTION AND SPEAKING…WELL, HUGE.** HUGE BECAUSE WHEN THEY ARE INTERACTING IN SOME ASSIGNMENT THAT THEY DON'T NEED TO TALK IT'S WONDERFUL. Now, WHEN IT'S TIME TO SPEAK THEY GET STUCK. THEY GET REALLY STUCK, NÉ? I don't know if it is inhibition, né? I say 'house'. 'What was that she said?' Né? **SO, I SAY IT AND THEY PRONOUNCE IT NICELY AT THE TIME TO REPEAT, BUT WHEN THEY NEED TO SPEAK BY THEMSELVES, IT DOES NOT COME OUT.** Then, when we are in that interaction in class listen/repeat, it's fantastic. Now, if it's only individual, it gets difficult. Especially if the student says something like, for example, 'my name is…' né? (...). They know what 'my name is' is, but some create a barrier and don't want to learn anyway. One speaks and then the others tease him. (Nina, Int. 2)	Defining interaction (listen/repeat, no talk)	Generalisation (interaction, get stuck) Uncertainty (I don't know) Shared knowledge (né?) Articulation of teacher and students' voice Evaluation (wonderful, fantastic)

Original version:
1. Aconteceu na minha primeira experiencia como professora na rede pública, imaginando-se que alunos do 9º ano ja tivessem uma base de conhecimento em inglês elaborei um quiz sobre o mesmo assunto "Like and dislike." Primeiro que para eles entenderem tive que explicar tudo em português. Depois das explicações começamos a atividade. Tentei de todos os modos, fazendo mímicas usando outro vocabulário para que os mesmos entendessem as palavras em inglês, alguns assimilaram sendo que a maioria não, então para não perder a aula, fazia as perguntas em inglês com as mímicas e os que entendiam falavam em português para os outros, e assim conseguimos nos entender, no final foi uma aula divertida e produtiva, pois os alunos conseguiram entender a dinâmica, não quanto o esperado, mas concluíram o trabalho. (Nina, Narr. 1)
2. Usando a música "Let it go" elaborei um *listening* onde os alunos tinham que completar a música. Por ser uma música atual e estar na midia a maioria acertou sem muitas dificuldades. Tive apenas que escrever no quadro aleatoriamente as palavras que estavam faltando. A primeira vez que escutaram estavam sem o papel apenas tentando identificar as palavras que estavam no quadro. Depois que entreguei a música repeti mais 3 vezes e alguns já na primeira haviam completado. Depois dessa atividade os alunos cantaram a música empolgados por terem completado sem erros. (Nina, Narr. 2)
3. A diferença entre interação e fala...assim, muita. Muita porque, quando eles estão interagindo em algum trabalho que eles não precisam falar, é uma maravilha. Agora quando é na hora da fala, ele travam demais. Travam demais, né? Eu não sei se é vergonha, né? Eu falo 'House'. 'Como foi que ela falou?' (...) Né? Então eu falo, eles pronunciam legal, na hora de repetir, mas quando eles vão falar sozinhos, não sai. Então na hora que a gente tá naquela interação na sala listen/repeat é uma maravilha, agora quando é só individual, o bicho pega. Ainda mais se ele fala uma coisa assim, por exemplo, 'my name is, né?' (...) sabe que é 'my name is' mas tem aqueles que colocam uma barreira e não querem aprender de jeito nenhum, falam... aí a gozação. (Nina, Int. 2)

Table 6.41 shows that the episodes each have distinct characteristics, but all show the interrelation between the four constructs. For example, whereas episode 1 has several examples of decision-making, episode 3 does not. However, all the episodes present evidence of knowledge and beliefs. The idea of thought subtly emerges throughout the episodes. Other evident differences are connected to the discursive strategies. On the one hand, episodes 1 and 2, which are written narratives, do not present most of the common emerging strategies. They are more straightforward and have more formal language than episode 3. On the other hand, episode 3, which is a spoken narrative, offers all the same discursive strategies usually identified in other participants' narratives. The analysis also suggests that the idea of interaction is more evident in episodes 1 and 3, than in 2.

Nina, like Barbara, seems to be a demanding teacher who uses her experience to improve learning in her class. The analysis demonstrates that she articulates teacher cognition of her practice, but interaction does not perform a primary role in her narrative. Also, as happened in Barbara's

stories, in Nina's the public school context seems to strongly affect her teaching – e.g., dealing with crowded classrooms and students who are not interested in learning a foreign language. The analysis shows that Nina is aware of such influence.

6.7 Interpretation of the public school data analysis

This section gives a general interpretation of the public school data analysis considering the interrelation between the constructs of teacher cognition, interaction, and the discursive strategies. Later, Chapter 7 offers a detail discussion of the results of this analysis, including the understandings of both the private and public school contexts. Thus, this section presents the underlying assumptions made about the analysis, drawing a parallel with the PEC results.

The analysis of the public school draws attention to these main points: similarly to the PEC results, in the public school the four constructs of teacher cognition are closely interconnected; the idea of personal practical knowledge (PPK) which seems to play a key role in generating understanding of the other three constructs; the notion of the *personal* in the PPK emerges in the public school narrative ; teachers' awareness of the role classroom interaction plays in their practice; and teachers' individual ways of telling their experience in the classroom.

Other important points to stress are that this study benefitted from the spoken narratives because the participants in fact had the floor as suggested in

Riessman (2012); the public school teachers also used codeswitching in most of their episodes; and the teachers also had their own individual style when telling their stories and this influenced the results.

Thus, these teachers' narratives show that interaction can be interpreted in Natalia's view as *everything between teacher and students* (Section 6.3.4). From Teresa's perspective, it is to *have students interacting among each other* (Section 6.4.6). In Barbara's viewpoint interaction is *to put the methodologies together and prioritise student learning* (Section 6.5.2). Finally, in Nina's view interaction is *difficult!* (6.6.2).

Nevertheless, in the public schools, as the analysis shows, teachers did not often describe the detailed interactive activities like the PEC teachers did. Instead, they discussed the contextual problems which hindered interaction and learning. Some of the challenges mentioned in the episodes appear to be inherent in these teachers' contexts (people, time, and place).

The four participants – Natalia, Teresa, Barbara and Nina – teach in similar settings (e.g., public schools, with limited resources, large classes with about 40 students, including underprivileged pupils) and have similar problems. Also, all the teachers demonstrated that they need to find solutions to help their students learn in the best way possible (e.g., by having extra classes, taking realia into class, being creative, and producing or paying for their own material).

7 Articulation of teacher cognition: discussion of the data analysis

7.1 Introduction

This chapter will discuss the results of the analysis presented in Chapters 5 and 6, in light of the literature which has underlain this study. The discussion is grounded in the ideas which have been considered up to now to further the understanding of the results, namely, teacher cognition, classroom interaction, narrative, discourse and EFL teaching. Thus, this chapter revisits and discusses the main resulting points introduced in the analysis and now discussed in detail.

These resulting points relate to both the *emerging themes* and the *assumptions* seen in the analytical chapters 5 and 6. In sum, the *emerging themes* were considered throughout the data analysis as the discursive strategies used by the participants. They refer to *generalisation*, *shared knowledge*, *uncertainty*, *evaluation* and the *articulation of teachers and/or students' voices* (introduced in Section 4.4.5 and discussed in Chapters 5 and 6). The *assumptions* were considered in the final interpretations of each educational context, PEC and public school (presented in Sections 5.8 and 6.7). They refer to the interrelatedness of the four constructs of teacher cognition and the idea of knowledge as PPK, central in relation to the other constructs, the idea of the *personal* in PPK, teachers' understandings of interaction, among other assumptions. Thus, these emerging themes and

assumptions generated five main topics related to both the private and the public school context. They are:

1. the nature of knowledge and its interrelation to the other three constructs (thought, beliefs and decision-making),
2. teachers' knowledge of interaction,
3. teachers' styles in narrativising teacher cognition,
4. the contextual influences in teachers' narratives, and
5. the idea of narrativising teacher cognition.

These five topics are the basis of the organisation of this chapter in the following way. Sections 7.2 to 7.4 discuss the nature of knowledge, the conceptualisation of interaction, teachers' styles of storytelling, and contextual influences, relating to the numbers 1 to 4 above. Then, Section 7.5 explains how these topics contributed to the construction of the model of *narrativised teacher cognition* proposed by the current study, relating to number 5 above.

7.2 The nature of teacher personal practical knowledge and its influences on other constructs

This section aims to build an understanding of the idea of knowledge, as constructed in this thesis, from the notion of personal practical knowledge (PPK). Although the analysis was developed by context, namely the PEC and the public school – separately, in the next sections the discussion is of both settings together. The sections also resume the discussion, introduced in the

analysis, of the three main relationships which emerged from the interpretation of knowledge as a construct of teacher cognition in the teachers' narratives.

This section is arranged in the following manner: Section 7.2.1 focuses on the nature of narrative, and Sections 7.2.2 to 7.2.4 address the three relationships mentioned above: 1) the ways in which the idea of knowledge links to the other three constructs – thought, beliefs and decision-making; 2) the interrelatedness of knowledge and experience as it emerges from the participants' articulation of teacher cognition; and 3) the role of the *persona* in the understanding of *personal practical knowledge* (PPK) as assumed in this thesis.

7.2.1 The nature of knowledge: the conceptualisation of personal practical knowledge

Up to now, knowledge has been considered in the present study as the teacher's *personal practical knowledge* (PPK) which in general terms involves individual, academic, and professional awareness. Specifically, the *personal* includes teachers' general beliefs and assumptions about teaching and living as discussed in Clandinin and Connelly (1987), and the *practical* involves teachers' actions, decisions and experience as in Elbaz (1983). In addition, in this study the notion of teacher knowledge is closely associated with language teacher education and to the context in which the teachers operate.

Nonetheless, considering the data analysed in the previous chapters from the teachers' narratives, the nature of knowledge seems to be constructed from a combination of aspects. Thus, the notion of these constructs involves the teachers' previous knowledge and experience; their academic and ongoing education; their individual understanding of contextual influences; and their knowledge of EFL teaching practices, among other influences. Because all the participants are experienced teachers who are in general well-informed about EFL teaching, the idea of knowledge is established on strong foundations.

From this perspective, considering the combination of knowledge, experience, teaching procedures, and context, there seems to be a need to revisit and examine the conceptualisation of *personal practical knowledge* which has been used up to now. In this exploration of teacher cognition, following the analysis presented in Chapters 5 and 6, knowledge emerges with multiple meanings. For this reason, I now turn the attention to the idea of *personal practical knowledge* within the Amazonian teachers' narratives.

Section 2.2.2 introduced knowledge involving the concept of personal practical knowledge (PPK) as explored in Elbaz (1983), Clandinin (1986), and Golombek (1998), among others. For the purpose of this discussion about knowledge I focus on Golombek's (1998) perspective of PPK.

In a study of the tensions experienced by two language teachers in the classroom, Golombek (1998) offered four categories of knowledge: *knowledge of self*, *knowledge of subject matter*, *knowledge of instruction*, and *knowledge of context*. For the purposes of her study, she presented a similar

but reduced version of Elbaz's (1983) view of knowledge. Similarly, in the present study, I adapted Golombek's (1998) PPK to explain the nature of knowledge as evidenced in the teachers' narratives.

It can be argued that the variations made to the models of knowledge in the literature contribute to a better understanding of the construct – knowledge. For instance, Elbaz's (1981, 1983) notion of *practical knowledge* inspired Clandinin and Connelly's (1986, 1987) (1985) conceptualisation of *personal practical knowledge*, and both works influenced Golombek's (1998) model of PPK for language teachers. More recently, Morton and Gray (2010) also added a category to Golombek's model (e.g., the idea of the learner's identity) in their study of shared lesson planning in a TESOL course.

Thus, drawing on Golombek's (1998) four categories of knowledge (i.e., knowledge of self, of subject matter, of instruction, and of context) and the results presented in the two previous chapters, I suggest the integration of a new category, namely, *knowledge of interactional context*. This perspective refers to the teachers' knowledge of classroom interaction in their individual contexts.

Considering the boundaries which outline each category in Golombek's model can help the conceptualisation of the new one. In brief, *knowledge of self* refers to teachers' identities; *knowledge of subject matter* relates to the subject taught; *knowledge of instruction* refers to teaching and teachers' roles; and *knowledge of context* relates to the setting (Golombek, 1998, pp. 451-452). Then, *knowledge of interactional context* can be considered as an

intermediate category which overlaps with both *knowledge of instruction* and *knowledge of context* as seen in Golombek (ibid.).

Thus, from this view of PPK, a description of the categories of knowledge in light of the results of the current study follows. The interrelation of these forms of knowledge to the other constructs of teacher cognition (thought, beliefs and decision-making) is also noteworthy. This thesis also adopts Golombek's (1998, p. 452) understanding that the categories "are neither a comprehensive nor a prescriptive view of what teachers know" and this description suggests that there is an overlap and a relationship between the categories, presented below in detail.

Knowledge of self concerns the individual, personal, perceptions that teachers develop in their teaching experience. It also relates to the teachers' *personas*, interactive roles in the classroom, and personal beliefs. For instance, when Leonor talks about the teacher's *personas* and Lidia mentions her *multiple personalities* they also articulate their beliefs about teacher's numerous roles (see also Section 7.2.4 for the idea of *personas* in the PPK).

> **I believe that teachers have some sort of persona when they teach**, when they are **in this classroom environment** which may be **different from who they are most of time outside the classroom**, and this persona that I believe that I have... (Leonor, Int. 1, Section 5.6.4)
>
> In my **multiple personalities**... as teacher... you know. I try to administrate the classroom, think of structures, thinking of vocabulary, the parts of my lesson... (Lidia, Int. 2, Section 5.4.3)

The examples above effectively represent the notion of knowledge of self because Leonor and Lidia express their understanding of and beliefs about their own roles as EFL teachers.

Knowledge of subject matter suggests that the teachers are knowledgeable about EFL teaching and learning. In this case, it also incorporates language proficiency and a thoughtful process of decision-making. Nina's utterance below illustrates this point.

> **I try to make them correct themselves by playing around**, so that **they do not feel embarrassed**. Because **when they are openly corrected, they create a barrier** and don't want to say anything else. (Nina, Int. 1, Section 6.6.4)

In the example above, Nina seems to know that a safe environment can keep her students' learning process. This category also includes the use of metalanguage, which was considered evidence of knowledge in the teachers' narratives. In short, teaching metalanguage refers to the terminology used for the description of technical language in teaching practice (e.g., monitoring, grammar noticing, scanning, etc.). As explained by Walsh (2006b, p. 136), metalanguage is "an important indicator of interactional awareness since it allows interlocutors to verbalize their understanding of key concepts." The examples below:

> I try to **tailor my teaching** to my students. If I have teenagers I'll try to be **using an approach which reaches them** (Leonor Int. 1, Section 5.6.2);
>
> (…) they have a **language as a target** (Eduardo, Int.1, Section 5.3.2);
>
> I **record myself** in class and then **I revisit it** and I see things that shouldn't be there or why they happen and **I reflect** a lot upon them (Lidia, Int. 1, Section 5.4.2).

As shown in the examples above, the teachers consciously express their awareness and understanding about key areas of teaching by using technical terms.

Knowledge of instruction refers to whether the teachers are well informed about methodological matters and the decisions they need to make to set up effective interactive activities in the classroom. As seen in the examples below, Barbara and Natalia talk about the use of the appropriate methodology to *improve learning*.

> To me **interaction is to put the methodologies together to improve learning**, but **without creating any bad habit**, any methodological bad habit. (Barbara, Int. 1, Section 6.5.2)
>
> In the first day of class, **I prepared a lesson about 'greetings'**. **I used several 'flashcards' because that was the material I had available** at that moment. In this class **I presented a pre-activity** (discussion) about the scenes shown in the flashcards. (Natalia, Narr. 1, Section 6.3.3)

In terms of language teacher education, what the teacher knows (or is expected to know) in order to be a teacher is later reflected in their practice (Freeman, 1996). In this study, the teachers' narratives show that knowing about different methodologies means not making assumptions, for example, that their learners are empty containers (e.g., Natalia's students discuss the flashcards and are not taught about them). This perspective resonates with Freire's (1987) idea that there is an equivocal view of education (e.g., the *bench-sitting* conception) which does not consider the learner's previous knowledge, does not support creativity and transformation, and therefore does not generate additional knowledge. These teachers' instructional knowledge, I argue, seems to have been gradually built up through teacher education and experience and is later reflected in the teachers' interaction with students. From this perspective, it appears that teachers' instructional knowledge closely affects their learners' knowledge.

Knowledge of interactional context indicates that the teachers understand the situation in which interaction can take place. Interactional thoughts and decisions are also included in this category. In addition, interactional contexts involves individual knowledge of the classroom and of EFL teaching methodologies. The idea of classroom here is inclusive, referring to both the space for the lesson and the group of learners. It can also influence the conceptualisation of *real interaction* discussed in Section 7.3. Below is an example of this category.

> Then, **how is learning going to happen**, né? **If with 25 students it is difficult**, *né?* (because you need to interact with all of them), **let alone a class with 40/50 students**. How do you…? **You need to have a methodology to have students pay attention**, because it's difficult, but they like it. (Teresa, Int. 1, Section 6.4.2)

Teresa's articulation (above) shows her awareness in terms of the possible actions she needs to take in her different settings (a class of 25 or of 50 students) and for different students, suggesting that she knows her limitations and the difficulties of the classroom context in which interaction takes place.

Finally, *knowledge of context* represents the teaching setting which can range from the classroom to the community. In this study, the Amazonian school is also key to the understanding of the teachers' context, as well as its actors, time and place (Golombek, 1998). The utterance below is a good example of this category of knowledge.

> Sometimes **you have a student considered *top*, who is in the public school**, and **sometimes you have that student who needs to be there because he needs breakfast, lunch**, do you understand? School meal…because he does not have it at home. So, **there are many levels**. (Natalia, Int. 1)

In this utterance there is evidence that Natalia is knowledgeable about her specific context in terms of the needs of her students, the socio-economic problems of the community and the ways these factors affect her classroom teaching and learning. Later, Section 7.5 explores the contextual influences in detail.

In view of these five categories which form this study's perspective of personal practical knowledge (PPK), I can suggest that knowledge, as it emerged from the teachers' narratives referring to teacher cognition, seems to have new meanings and these categories of knowledge are gradually developed through teachers' mental processes and actions.

I can also state that what this research has shown me about knowledge is that by understanding knowledge better, I can also understand its relationship to the other three constructs (thought, beliefs and decision-making) better. Thus, for the purpose of this thesis, knowledge, as PPK is considered as a teacher cognition construct incorporating the knowledge of the teacher's self, EFL teaching and learning, the pertinent methodologies, the interactional context, and the contextual influences. In this interpretation, knowledge is also closely related to the understanding of the other constructs narrativised by the teachers.

The next sections (7.2.2 to 7.2.4) discuss the emerging interrelatedness between knowledge and the other three constructs, to experience, and to the idea of the personal in PPK, respectively.

7.2.2 The relationship between knowledge and the other constructs

The first interrelation to knowledge which emerged from the analysis refers to the other three constructs: thought, beliefs and decision-making. This idea is in fact apparent in most of teachers' articulation. As seen in the final interpretations of the analysis chapters (5 and 6), knowledge can occupy different positions in relation to the constructs of teacher cognition. From the assumptions presented in these chapters, the understanding is that the interrelatedness of the constructs of teacher cognition produces multiple interpretations. This can be noted, for example, when the same episode could have multiple coding, representing some or all of the constructs.

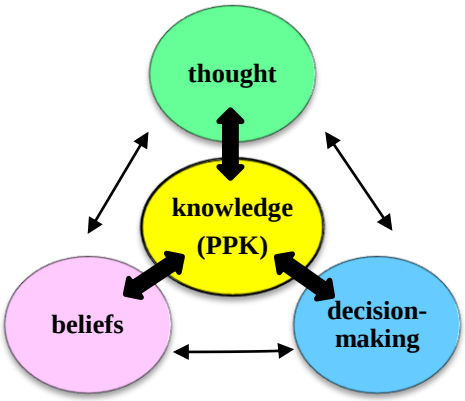
This perspective suggests that understanding teacher knowledge can improve the comprehension of their other cognitive processes. To clarify, the idea of knowledge that emerges from the analysis chapters is of a key construct which is the basis of the other three constructs. Thus, it appears that it is from the teachers' PPK that thought, beliefs and decisions emerge.

As mentioned, in Section 2.2, the interrelatedness of the constructs of teacher cognition is not a new concept in the literature (Borg, 2006). Before they were studied under the broad term of teacher cognition, some of the constructs had already been a topic of investigation in the educational field. However, it is the relation between the four constructs altogether (knowledge, thought, beliefs and decision-making) that generates a new understanding of the representation of teacher cognition in the present study.

Thus, as mentioned, the conceptualisation of knowledge has been gradually constructed built in this study from the interpretation of the teachers' narratives. The construction of PPK starts from the individual analysis of the four constructs of teacher cognition as articulated by the teachers in their narratives. Subsequently, the conceptualisation of PPK has been socially and contextually constructed through its interaction with thought, beliefs and decision-making (see the discussion of the nature of knowledge in Section 7.2.1 above).

From this interrelation emerges a further understanding that thought, beliefs and decision-making can also be seen as different *domains of knowledge construction*. In other words, these three domains support and contribute to a new construction of knowledge. From this perspective, knowledge is superordinate in the relation to thought, beliefs, and decision-making. In addition to the interrelation with knowledge, these domains also have interactive connections between each other, contributing to their own meanings (see representation in Figure 7.1 below).

Figure 7.1 Knowledge and its relationship to the domains of knowledge construction



As figure 7.1 above shows, the interrelationship which emerged from the analysis is represented by the link between knowledge and the other constructs – thoughts, beliefs and decision-making. In this representation, the *domains of knowledge construction* develop from knowledge and in the same way contribute to the construction of knowledge in the teachers' narratives. This relationship is represented by the large reflexive arrows ⟷. The three external domains also have an interrelation to each other. This relationship is represented by the thin reflexive arrows ↔ in Figure 7.1.

In order to understand the relationship represented in Figure 7.1, I consider the idea of the *thought domain of knowledge construction*. For example, this study has shown that teacher thought can be based on previous knowledge, that is, teachers think about what they already know (this view is seen in Clark & Peterson, 1986; Debreli, 2012). In this case, thought becomes a domain of knowledge construction because it adds the meaning of thought to the understanding of knowledge. Then, referring back to the perspective of PPK, the *thought domain of knowledge construction* would be positioned in all five categories. Therefore, we can consider a *thought domain of knowledge* in relation to the teacher self, the instruction, or to the interactional context, and so on.

This suggests that the other domains, beliefs and decision-making can be observed in similar ways. Considering that both beliefs and decision-making emerge from knowledge, then, as with thought, there will be a *beliefs domain of knowledge construction* and a *decision-making domain of knowledge construction*. Both domains of knowledge will correspondingly be categorised

in relation to the teacher him/herself, the subject matter, the instruction, the interactional context, and the context.

The relationships between the constructs in Figure 7.1 above, resonate with the literature of the education area which has already discussed the constructs in different ways. For example, in Dewey's (1910, pp. 3-5) conceptualisation of thinking, he says "thoughts that result in belief have an importance attached to them which leads to reflective thought…" This perspective places thoughts and beliefs in an interactive relationship of mutual influence, which can generate reflection.

In addition, the connection between knowledge and decision-making is discussed in Bailey and Nunan (1996), and in Freeman and Johnson (1998). Their work considers teacher education and teacher knowledge to be as closely related to teachers' decisions inside and outside the classroom. This view can be observed in the notion of the decision-making domain of knowledge (see Figure 7.1).

Finally, the inclusive conceptualisation of the constructs can be seen in Borg (2006), who shows the various connections between the constructs in his research into teacher cognition (see Section 2.2). Although it has been widely studied, there are still gaps in the understanding of teacher cognition, its constructs, and all the possible relationships in the abstract nature of the concept. The notion of different domains of knowledge construction is an attempt to bring new understanding to the complexities of teacher knowledge.

7.2.3 The relationship between knowledge and experience

The second interrelation to knowledge which emerged from the analysis refers to the idea of experience. This theme can be tracked back in the educational literature to when Dewey (1910, 1916) developed his theories of knowledge, thinking and experience, and discussed the connections between these cognitive constructs. In his view, “the function of knowledge is to make one experience freely available in other experiences” (Dewey, 1916, p. 365). In the case of the teachers’ narratives, as they develop their PPK, they open the way to new experiences.

In addition, experience has been the main theme in the study of narrative as a method of enquiry (Clandinin & Connelly, 2000), as mentioned in Section 3.5. In this study, narrative refers to the stories of teachers’ experience (Andrews, et al., 2013). Although experience itself is also studied as a teacher cognition construct, it was not considered as such for the purposes of this study (see Section 2.2 for details of the choice of the constructs). However, in the analysis, experience emerged from the teachers’ narratives as having a close connection to knowledge and became a meaningful point to refer to in this discussion.

This relation occurs as an interdependent connection, which seems to be apparent in the teachers’ narratives. For example, in some cases, the participants’ articulation of the construct seem to start not only from knowledge, but also from teachers’ personal practical experience. Thus, it seems that experience emerges from knowledge, but knowledge also progresses from experience (as seen throughout Chapters 5 and 6).

7.2.4 The *personas* in the personal practical knowledge

The third interrelation to knowledge refers to the idea of the personal derived from *personal practical knowledge*. In brief, it denotes a combination of knowledgeable experiences from personal and professional situations which teachers have and use in their classroom (Ben-Peretz, 2011; Golombek, 2009). The analysis in the previous chapters showed two main ways in which the personal emerges: as aspects of the participants' individuality is revealed through their own stories and their styles of storytelling (discussed in detail in Section 7.4). The notion of *personal* considered at this point refers to the former, that is, the nine individual sorts of knowledge which emerged from the stories of classroom interaction (Eduardo, Lidia, Flora, Leonor, Marco, Natalia, Teresa, Barbara and Nina's individual knowledge). It is also referred to as knowledge of the self which involves teachers' individual roles and beliefs.

These nine individual understandings of language teaching, classroom practice, and classroom interaction become apparent in the teachers' voice explored in the analysis. The personal knowledge (or knowledge of the self) constructed by the teachers in their narratives can also be related to personal judgement about a subject or to personal experience (e.g., Barcelos e Kalaja, 2011). The examples below illustrate these points.

> You know, I try to make them correct themselves by playing around, **so that they do not feel embarrassed**. Because **when they are openly corrected, they create a barrier** and don't want to say anything else. (Nina, Int. 1, Section 6.6.4)

> Here we end up making the translation of the whole text. **Because if you don't do it, they won't understand it…you are really deceiving the kids**. (Barbara, Narr. 1, Section 6.5.5)

> Then, **on the next class I tried (…) to do it in a different way**. I mean, this is one that I can say, there are many, many... I don't know. Another one it was like **a big moment I have to say**. It was a moment...you know… I was... I... **I used to touch students**. (Lidia, Int. 1, Section 5.4.2)

In the first example, Nina's judgment relates to students' attitudes. In the second, Barbara evaluates the need to translate so that students can understand the text. Then, in the third example, Lidia assesses her own attitude in the classroom. It can be argued from these three examples that each of these teachers' evaluations of their practice are individual and there is the possibility that other teachers react differently to a same situation.

Consequently, individual, personal knowledge contributes to the construction of individual teaching routines. Every experience which the teachers have lived enters this uncertain equation to collaborate with the personal knowledge. Later, I consider how the personal is affected by the contextual influences such as language teaching in Amazonas, private and public schools, adults and children learners, beginner and advanced groups, and other contextual aspects (for contextual influences see Section 7.5). Therefore, when expressed in narrative and constructed in the teachers' articulation, teacher knowledge seems to have new individual representations. In other words, this study found evidence of Eduardo's knowledge, Teresa's knowledge, Barbara's knowledge, Lidia's knowledge, and so on. What is personal to them yields the differences between them, even if they share a same teaching context.

The idea of teachers having different *personas* according to their students' needs, adds to the notion of personal in PPK. For instance, Flora's knowledge could create several personas exhibited by her according to

which or even each situation she faces in the classroom. In other words, if Flora is teaching adults she might make use of several personas which she would not employ when teaching kids – the opposite can also be true.

Thus the personal acquires new dimensions with the probability that teachers have different personas. Leonor's utterance about *teachers' personas* (e.g., ***I believe that teachers have some sort of persona when they teach…*** – Section 5.6.4), for example, indicates that some teachers are aware of the multiple teaching personas which they can make use of. The personal also emerges in teachers' individual positioning towards classroom interaction, which is discussed in the next section.

7.3 Teachers' knowledge of interaction and *real interaction*

In this section, the discussion centres on teachers' conceptualisation of classroom interaction. Much of teachers' articulation (e.g., the ways teachers express their ideas in words) revolves around teachers' own understandings of interaction, as the main point or concept of the study. The analysis showed teachers defining, exemplifying, and positioning themselves in relation to interaction (see Section 4.4.5 for the thematic analysis). As a result, there were multiple interpretations of what interaction means and how it occurred in the classroom. A key emerging topic from the results is the notion of *real interaction* which was articulated by most of the teachers, especially in the private school context.

The analysis revealed that several participants understand interaction as every moment inside the classroom (and sometimes outside the classroom as well) but they also expressed a distinction between these moments and what they referred to as *real interaction*. Other participants sometimes offered a vague definition of interaction, or just exemplified how interaction was constructed in their classroom. This last was more common in the public school teachers than the PEC teachers.

These different conceptualisations also relate to the concept of knowledge and the contextual influences referred to in Wedell and Malderez (2013, loc. 545), who point out that different contexts may understand knowledge in different ways, so that

> in some educational cultures the way in which knowledge is defined and the learning approaches that result may remain largely unchanged throughout the education system.

The analysis revealed that the teachers in both contexts are certainly able to construct knowledge in their narratives and they also seem to be constantly changing their views of their own practice. For example, Natalia's concerns for her students demonstrates that she is willing to accommodate to her students' situation (e.g., *sometimes you have that student who needs to be there because he needs the breakfast*). And I believe she starts those changes in her classroom.

In this study, I argue, both cases interaction and real interaction need to be taken into account since there is a dichotomous view of the topic. For instance, the teachers who brought up the idea of real interaction exhibited their understanding by using terms such as *real*, *really free*, *pure*, among

others (for an overview of the analysis, refer to Sections 5.8 and 6.7), while other teachers offered a general view of interaction. The following examples extracted from the analysis show the two types of conceptualisation of interaction.

Ex. 1. Eduardo: *it's* ***really free****, it's not automatic…it's a* ***really social*** *thing* (see Section 5.3.4).

Ex. 2. Lidia: *it's the* ***pure exchange****, the* ***pure negotiation*** *of ideas* and *speaking activities are the basis for* ***real****,* ***true****,* ***meaningful*** *interaction* (see Section 5.4.3).

Ex. 3. Natalia: *classroom interaction is* ***about everything****: between teacher and students, among students* (see Section 6.3.4).

Ex. 4. Nina: *The* ***difference between interaction and speaking****…well,* ***huge****…because when they are* ***interacting in some assignment that they don't need to talk, it's wonderful*** (see Section 6.6.6).

In examples 1 and 2, the teachers expressed their ideas of *real interaction* and there are two moments when interaction is *true* and *meaningful*, according to the teachers. Then, examples 3 and 4, offer a general view of *interaction* (*about everything*) and non-speaking interaction (which is *wonderful*). In 4, interaction is not specifically defined, but contrasted with speaking.

The participant teachers' general conceptualisation of interaction resonates with the literature explored in this study in Section 2.3 (e.g., the idea of collaborative learning seen in Nunan and Bailey, 2009). However, the idea of

real interaction only partially links to the literature. On the one hand, the definition adopted in the study refers to every collaborative moment which happens between teacher and students as well as amongst the students themselves. On the other hand, the idea of real interaction yields further understandings: it is reserved for successful student participation, collaboration and learning in meaningful moments. Therefore, Flora's first-day lesson with mechanical activities, in her view, does not represent *real interaction* (see Section 5.5.2). Thus, *real interaction* refers to the interaction which teachers accept as meaningful in their own context and from their own individual beliefs. In other words, the idea of real interaction needs the teachers' individual evaluation to be considered as such.

In addition, the teachers' conceptualisation of *real interaction* resonates with Walsh's (2013, p. 19) idea of the "centrality of interaction to teaching and learning." In other words, the teachers are aware of the importance of classroom interaction in their classrooms. Thus, the teachers differentiated between a simple exchange between them and their students and a meaningful (real) interaction. Specifically, not every moment stands as a good representation of their idea of interaction. Thus, I argue that real interaction represents the teachers' awareness of the importance of interaction in the language classroom as a means to creating authentic and meaningful learning.

For the purpose of this study, both angles of this dichotomous understanding need consideration, because *interaction* or *real interaction* can be interpreted differently in individual situations. For example, when Nina talks about

teaching countable and uncountable nouns during a simulation of a picnic with her students, interaction was happening (see Section 6.6.3). Her activity could also be considered an example of real interaction, because according to her narrative there was meaningful learning.

The analysis suggests that all the activities described by teachers – students talking (or not) to each other, reading a text, presenting an assignment, saying what the colours are, singing a song, solving a task, and so on – can be considered as having levels or *degrees of real interaction*. In brief, *degrees of real interaction* represent the moments of interaction which can be considered *real* and meaningful, as suggested by the teachers. Lidia takes a similar view:

> We don't know if learning is not taking place. We cannot measure it. It's not true somebody is learning just because somebody is talking. Is that right? That's not true. I can gather evidence though... it is there... it is present? (Lidia, Int. 2, Section 5.4.3).

For Lidia it is not a question of realness, but of truth. She is concerned with the evidence for and the measurement of interaction. The notion of realness resonates with McCarthy and Carter (1994, p.106) who, discussing spoken and written modes of vocabulary, state that "most language teachers work with a fairly reliable intuitive feel for the '*spokeness'* and '*writeness'* of individual words." I argue that in relation to interaction, teachers seem to have a feeling for *realness*.

It is evident in the analysis that in different contexts, different degrees of real interaction, or the realness of interaction can be observed. Thus, it is necessary to define what can be considered more or less real in the idea of

interaction. Here, realness is not the same as authenticity. Authenticity in the classroom refers to the simulation of real life events, authentic materials and actions related to awareness and autonomy (van Lier, 1996, p. 13). Realness in classroom interaction, in this study, relates to meaningful learning happening. Because realness cannot be measured, as pointed out by Lidia, above, I propose an understanding of the degrees of real interaction, considering that in the narratives analysed, interaction of some kind occurred in the teachers' classrooms.

According to the teachers, any classroom moment can be considered interaction, but real interaction is subject to the teachers' acknowledgement that, it is, in fact occurring. This involves other aspects such as meaningful learning, the teacher's individual knowledge, and the classroom context. The teachers' articulation of teacher cognition showed that they had knowledge of the notion of interaction and real interaction in their practice. Finally, interaction occurs within degrees of *realness* which make it more real or less real, according to the teachers' positioning and knowledge.

7.4 Teachers' articulation of knowledge: styles of storytelling

This section offers a discussion of how teachers tell their stories with a basis in PPK. For the purpose of this study, the term *style* involves several meanings and is inspired by various perspectives, and embodies the ways in which teachers choose to deliver their narratives. For example, Biber et al.

(2002, p. 213) discuss the use of “style stance adverbs” which “tell something about a speaker’s manner of speaking.” It is also the ways teachers exhibit their personality in their stories and give their opinions about what they say. Style can also be represented by *footing*, or the shifts teachers make in their direct and indirect speech (Ribeiro, 2006). Finally, style can be seen in the idea of voice (teachers’ own voice and students’ voices) and agency (Hall et al., 2005). These three ideas generate the conceptualisation of teachers’ style I want to convey.

The teachers’ styles emerged in their narratives and relate to personal knowledge and to the contextual influences they experience. When teachers take the floor and talk about their professional experience, they articulate their ideas in a distinct way. Thus, teachers’ individual characters emerged from the strategic choices they made. These choices are here referred to as teacher’s styles of storytelling.

Teachers’ individual choices are also apparent in the use of discursive strategies (generalisation, uncertainty, evaluation, shared knowledge, and articulation of the teacher and students’ voices). To some degree, the teachers’ style was co-constructed with the researcher, because the prompts and questions played important roles in guiding and influencing the ways teachers responded. Therefore, generalisation was expected as a response to general questions, but other strategies mainly occurred as the participants’ choice.

For instance, the articulation of the teacher and students’ voices emerged in different ways and reflected much of teachers’ character. Most of the

teachers shifted from indirect to direct speech and back to indirect speech to vividly describe what happened in their classroom. Sometimes it was possible to follow a complete dialogue between teacher and learners or among students. This characterises the concept of footing, mentioned above (Goffman, 1981).

Another aspect that emerged from the teachers' styles occurred in the straightforward or dramatic tone the teachers give to their narratives. The analysis identified *epistemic, attitude and style stance adverbs* which gave their narratives "a variety of meaning" and "emotional attitude," as well as exaggeration and emphasis (Biber et al., 2002, p. 356).

For instance, Eduardo and Lidia usually were very emotional and dramatic at several moments of their narrative. Leonor, Marco and Barbara were straightforward in their ways of telling their stories and were usually very logical in their statements. Natalia, Teresa and Nina offered a serious tone through their utterances and Flora found a balance between the dramatic and simple, direct communication (see Chapters 5 and 6).

In addition, shared knowledge as a discursive strategy helped the interpretation of the ways in which most of the teachers establish a collaborative understanding with the research-as-listener. For example, the use of markers such as *you know*, *right*, and *né* gave the idea that teaching related to group action and grasping the meaning of teaching was only intrinsic to this group. It seems that shared knowledge here is not only sharing understanding, but also creating complicity and validating actions. The teacher's PPK also emerged in the idea of shared knowledge because

they usually shared their general ideas about teaching and topics related to teaching.

Thus, teachers' individual styles emerged from their narrative in relation to PPK. In other words, teachers' styles were influenced by their knowledge, but in turn, their styles influenced their articulation of PPK in their narratives (e.g., direct or emotional). This interrelation between knowledge and styles of storytelling can also be explained by the themes which emerge from the analysis, for example, the use of metalanguage, the techniques and methods used in the classroom, the teaching points mentioned, and so on. Finally, the choices teachers made whilst telling their stories facilitated or hindered the development of the understanding of their own narratives and of the messages they wanted to get across. Then, teachers' PPK played an important role in these choices.

7.5 Teachers' narratives and the contextual influences

This section presents a discussion about the ways in which the teachers' work environment influenced their knowledge, their experience, their conceptualisation of interaction, and their styles of storytelling. The idea of context I am interested in links to Walsh's (2002, p. 4) notion that the classroom is "a context in its own right, or rather, a series of interrelated contexts." Also, this thesis focused on the combination of *place*, *people* and *time* as considered in Wedell and Malderez (2013). Thus, when referring to the two contexts studied (e.g., private and public school), it can be noted that

the environment (schools and the classrooms) is occupied by *people* (teachers, students, staff and community) at a certain *time* (time for the lesson, current time, fieldwork time, representations of past and present).

From the analysis, two main themes emerged from the participants' narratives: the general conditions of the schools and the level of the teachers' awareness. They are both related to idea of the school as a place where knowledge is constructed and changed. According to Wedell and Malderez (2013, loc. 545),

> at extreme ends of another continuum one view of knowledge might be as finite, unchanging body of 'true facts', while the other views knowledge as constantly being (re)constructed and so changing and expanding.

The quote above suggests teachers' PPK can be influenced by the context (schools in Amazonas) in terms of changes which can occur to their practice. Therefore, teachers whose context often (re)constructs its knowledge have the potential to (re)construct their own PPK, as well. Thus, in that sense the conditions of the school also have their role in the construction of teachers' knowledge, and consequently, on the learners' knowledge.

From this perspective, then, the teachers' PPK will also affect the construction of the context in their narratives. Therefore, in this study, the interrelation between context and knowledge is considered in the following way: the context which (re)constructs knowledge (or not) affects teachers' PPK; teachers' PPK (re)constructed (or not) together with their context affect the representations of this context in teachers' narratives; the researcher's interpretations of both the teachers' narrativised PPK and narrativised context affects the construction of knowledge in this study.

Considering the two teaching contexts in this study, teachers' knowledge of their context is represented in distinct ways. On the one hand, PEC teachers' centre their narrative on the practice itself, not on the environment or problems related to it. They are concerned about making it right and having their students learn as effectively as possible, and they are worried about physical contact with the students, students moving around the class, and keeping their learners motivated. In this context, classroom interaction refers to the students talking in the target language to reach an outcome of a task (simple or elaborate). Also, in their narratives, teachers present student-centred activities which lead to autonomy, participation and therefore, learning (see Chapter 5).

On the other hand, the public school teachers centre their narrative on the school environment, discussing some of the problems which influence their teaching. They are concerned about how teaching-learning can function in a crowded environment, the events happening around their classes, and hungry students who may be neglected by their own parents. In the public schools, classroom interaction refers to students performing simpler and more mechanical activities (than in the PEC) in L1 and/or L2. In addition, in their narratives, teachers present mainly teacher-centred activities in which autonomy and participation are somehow limited, and learning occurs at a different level (see Chapter 6).

These two different representations of context, as noted above, affect the interpretation of these teachers' PPK, of their view of the classroom, and of their ideas of interaction. However, from the narratives, two understandings

emerge. One is a general view of these contexts, PEC and public school in Manaus, Amazonas. The other is the representation of each teachers' individual context which involves their class size, teaching experience, students' age group, teaching timetable, and so on. This interrelatedness helps build the model of narrativised teacher cognition discussed in the next section.

7.6 Towards a model of narrativised teacher cognition

7.6.1 Building the model of narrativised teacher cognition

This section proposes a framework for understanding teachers' mental processes as expressed in their narratives, or a *model of narrativised teacher cognition*. Throughout this thesis, one key idea has been frequently mentioned, namely the interrelatedness of the main concepts which underpin this study: teacher cognition, classroom interaction and narrative. Hitherto, these ideas have been interpreted in order to build understandings of teachers' minds and practice as articulated in their narratives.

So far, this chapter has discussed the main ideas which emerged from the analysis. These ideas are the building blocks of the model proposed in this section, which will be presented in stages in order to facilitate the understanding of the model.

Narrative refers to teachers' stories of experience. It has been built in this study based on sociolinguistic (e.g. Labov & Waletzky, 1967) and literary views (e.g., Toolan, 2007), and combined with a narrative enquiry

perspective (e.g., Clandinin & Connelly, 2000). Thus, the understanding of narrative adopted here is the same one examined in the analysis: *a narrative* (written or spoken) *needs to have a complete sense of a story or response which reacts to a prompt, theme or question* (see Section 3.5.4).

Then, in this study *narrative* has been constructed as a story, a method and a methodology, or the *teacher's narrative*. It is also the narrative of experience told by the nine Amazonian participant teachers. Whilst the teachers told their narrative of experience focusing on interaction, their individual ways of talking about their experiences emerged. Specifically, they emerged in the analysis as different discursive strategies including the teachers' emotions and attitudes towards their stories. In general terms, these forms of storytelling have also been considered in this chapter as *teachers' styles of storytelling*. They involve teachers' PPK which affect the individual and group approaches to their stories, and in my opinion, they became important in the analysis of the narratives (see Section 7.4). Thus, in the model, teachers' narratives of experience also include the styles which emerged from the stories.

This study also focused on the idea of teacher cognition of classroom interaction. *Teacher cognition* is an umbrella term with multiple meanings which can affect the understandings of teachers' PPK and other constructs, their concept of interaction, and their view of the context (see Section 2.2). In this study, *teacher cognition* has also been construed as "a system of mental constructs" (Borg, 2006, loc. 434), which involves the understanding of four main constructs: knowledge, thought, beliefs, and decision-making. From the

general notion of teacher cognition emerged the idea of teacher knowledge (PPK), which has a central role in relation to the other three constructs.

The interpretation of teacher cognition explored in this study also centred on classroom interaction. This study has been interested in the teachers' own perspectives of interaction, considering that their classrooms are "unique social contexts in their own right" (Walsh, 2011, p. 25). The results suggest that teachers understanding of interaction involved the notion of *real interaction*, defined by *degrees of realness* or *degrees of real interaction*. In brief, real interaction as the teachers present it, involves meaningful learning and depends upon the teachers' own view of their classes, learning, and any contextual influences which need to be considered as such (see Section 7.3).

In this study *interaction* has been constructed as *the key to learning* and related to collaborative moments in the classroom when meaningful learning occurs. It is also the *real interaction* which involved the participation of both teacher and students, and students amongst themselves. Classroom interaction is also the focus of the study, which has added to the meaning of teacher cognition. Consequently, in the model, the conception of teacher cognition is not simply presented as teacher cognition. It includes the notion of classroom interaction and is represented as *teacher cognition of* classroom interaction. Therefore, when applying the model of narrativised teacher cognition the focus can be different. For example, this thesis' title says: Narrativising teacher cognition of *classroom interaction*. If there was another focus, such as teacher talk in the classroom, it would be referred to

as *teacher cognition of teacher talk in the classroom*. The next section resumes this idea.

So far, the notion of knowledge has been key to the understanding of all the elements of the model of *narrativised teacher cognition*. From knowledge came all the other interpretations and combinations, such as the relationships to the other three constructs (thought, beliefs and decision-making) seen in Section 7.2.2. Knowledge as a construct of teacher cognition has been considered from the perspective of teachers' personal practical knowledge or, *PPK*. As mentioned, this conceptualisation of PPK was drawn from Golombek's (1998) model to which one category was added, *knowledge of interactional context* (see Section 7.2.1). Thus, in the model, knowledge is seen in relation to the three constructs, or the three domains of knowledge construction (see Section 7.2.2).

In the teachers' stories of experience with the focus on interaction, context plays an influential role together with knowledge. In the story, context represents the place where the tale occurs according to the narrator's perspectives: people and time are key elements for building a coherent story. As seen earlier in this chapter, the context also contributes to the (re)construction of knowledge which is represented in the teachers' narratives (see Section 7.5).

In the present study, *context* has been constructed as the setting where knowledge is (re)constructed. It influences the teachers' PPK and the teachers' representations of their context in their stories. From these representations, the idea of context has multiple interpretations which

influence the results of this study. In the model, context appears as having an overall influence on all the other topics.

From the considerations of these points, the model of *narrativised teacher cognition* can be built. The next section offers a definition and shows the organisation of the model, explaining how the parts interacted in the research process.

7.6.2 The model of narrativised teacher cognition of classroom interaction

Thus, from the interrelatedness of the understandings above emerged the model of narrativised teacher cognition. For the purpose of this study, *narrativised teacher cognition* is interpreted as the representation of an array of individual or interrelated ideas of teacher knowledge and experience, which can be affected by the relationships between cognitive constructs and all other aspects relating to teachers' narratives such as their context, their styles of storytelling, and the focus chosen. Figure 7.2 below shows the interrelation occurs between these ideas.

The model of *narrativised teacher cognition* (Figure 7.2 below) offers a new stance in the research into teacher cognition and its constructs, as well as in narrative research. The approach to the data in the model explained below can generate different perspectives, yield new research dimensions and facilitate the understandings of teacher experience depending on the research focus, in this case, classroom interaction. Considering that teacher cognition involves teachers' mental processes, then, *narrativised teacher*

cognition becomes the articulation and representation of these mental nuances in teachers' stories, and so the co-construction and reconstruction of knowledge and new ideas.

Figure 7.2: The model of narrativised teacher cognition of classroom interaction

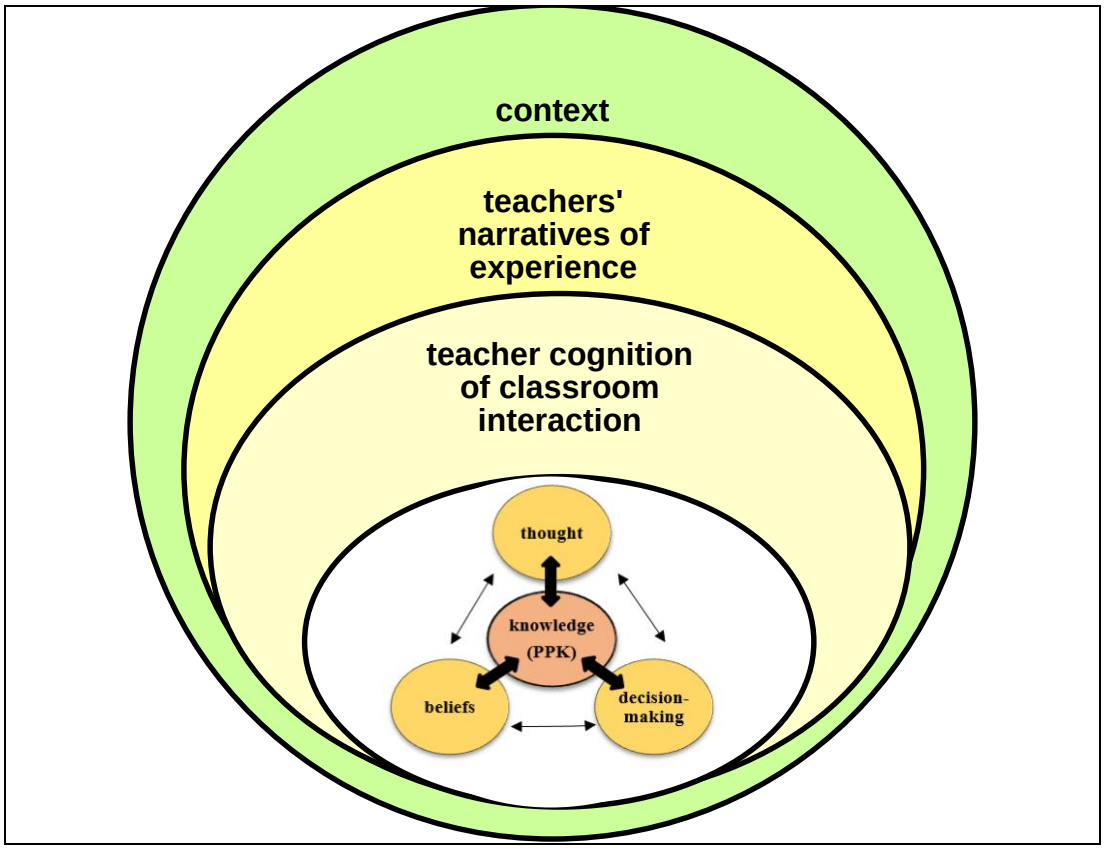


Figure 7.2 above shows how the model was constructed from the ideas discussed above in this section. The model is organised as follows.

The *contextual influences* surround the whole process because they affect all the elements in the model, albeit in different ways. As seen in this chapter, the context can influence (and be influenced by) the construction of knowledge and teachers' narrative styles.

Teacher's narratives of experience are represented in the 2nd circle of the model. They relate to teachers' stories as articulated in narratives of experience. In this research, it is also the main approach to the data – e.g., spoken or written narrative produced from narrative interviews or narrative prompts. Related to the narratives are the *teachers' styles.* They are also affected by teachers' individual or group (or community) influences, such as knowledge, context, experience, and so on.

Teacher cognition of classroom interaction relates to an inclusive, overall perspective of teacher cognition, considering all the possible interrelations between its constructs. Teacher cognition is the main idea from which the model developed and classroom interaction refers to the *focus* of the research, that is, another possible focus could be classroom management and would follow similar procedures (see previous section). It is claimed that the results of the conceptualisation of the focus generate the construction of *new ideas*. For example, in the case of this study, this refers to teachers' own understandings of interaction as expressed in their narratives (e.g., 'real' interaction).

Knowledge (or personal practical knowledge – PPK) refers to the conceptualisation of knowledge constructed in teachers' narratives from its interrelation with the other constructs and ideas. In this thesis, knowledge is constructed as PPK. The *other constructs* refer to thought, beliefs, and decision-making, and they have an interdependent relationship to knowledge (see Section 7.2.2).

Next chapter (Chapter 8) offers the conclusions to this thesis. It reflects upon this study's implications for teacher education and its directions for the future, considering the possible purposes and applications of the model of narrativised teacher cognition presented above.

8 Conclusion

8.1 Achieving the research aims

This chapter concludes the thesis by reflecting on its research aims and questions. It considers the strengths and limitations of this study and explores the significance of the work as well as its implications for the EFL field.

The use of narrative enquiry to investigate teachers' mental processes and experience is an accepted practice in language teaching and social sciences research. However, relatively little attention has been given to the study of the relationship between constructs and ideas which emerges from the notions of narrative, language teacher cognition and classroom interaction, all together. From this point of view, this study aims to show how teachers' conceptualisation of classroom interaction occurred in their narratives and how the proposed model of *narrativised teacher cognition of classroom interaction* can contribute to the study of all these main concepts.

The research process, I believe, made important contributions to the educational field. They are introduced in this section, but later discussed when answering the research questions.

One important achievement of this study is the systematic analytical process which enabled a comprehensive examination of the data. As seen in Chapters 4 to 6, this study benefitted from this cyclical process of data

analysis (as suggested in Creswell, 2013) which guided the several stages (initial and subsequent analyses) and helped the visualisation of the data from several perspectives. Consequently, it was possible to generate multiple interpretations of teachers' narratives, which resulted in the development of an understanding of the notion of narrativised teacher cognition of classroom interaction.

A successful moment for this research study was the procedure and development of the data produced during the fieldwork with teachers in Manaus, Brazil. As mentioned in Chapter 1, there is a gap in EFL teaching research in this context. However, I believe that the results of this study can contribute to new research projects on language teacher education in Amazonas.

Another significant achievement of this study refers to the notion of knowledge as PPK and to the understanding of ***knowledge of interactional context***. This category of knowledge has been added to Golombek's (1998) model of personal practical knowledge (PPK). Section 7.2 discusses these ideas in detail.

Finally, an important achievement is the generation of the model of **narrativised teacher cognition**. The model proposed, as seen in Section 7.6, aims to contribute to the understanding of teachers' practice, classroom interaction, and the narrative enquiry process, as well as to other teacher cognition studies. This model also hopes to motivate research through its replication and adaptability to other research processes to find different results in individual contexts or with other groups of EFL teachers.

These major achievements emerge from the results of the present study which was guided by three main questions discussed next.

8.1.1 Answering the research questions

This section considers the answers to the three main research questions of the current study. Throughout this section, I will show the interrelation between these questions, the achievements of the research, and the themes discussed.

- *What are teachers' own conceptualisations of classroom interaction in relation to their context and experience?*

The process of interpreting teacher knowledge, as addressed in Chapter 7, brought to light the conceptualisation of *real interaction* articulated by some of the teachers. The idea of real interaction – to some extent – contrasts with the notion of *interaction* as established by some teachers as noted in Section 7.3. The discussion suggests that the perspective of degrees of real interaction or degrees of realness has some common ground. Thus, teachers own conceptualisations of interaction refers to the degree of real interaction which, as noted, is determined by teachers' knowledge and position towards the concept, and influenced by the context in which they operate. Therefore, drawing on teachers' understandings, the realness of interaction can involve teacher and students' participation, moments of meaningful learning through fun activities, simulation of real life experience, repetition of terms and phrases, and affective activities such as role playing and singing. As

mentioned, many of these ideas are shared by Nunan and Bailey (2009) and Brown and Lee (2015) as efficient ways of teaching language.

The conclusions drawn from teachers' stories also indicate that the teachers' knowledge, or PPK of interaction is constructed in their narratives in different ways. For example, the teachers' awareness of interaction can be grounded in experience (in the teaching field or in the context studied), or in their beliefs about their practice. Similarly, the teachers' views of interaction link to influences from their context of operation which in turn are related to the construction and reconstruction of knowledge.

As noted in the last chapter, the context also affects teacher knowledge. Overall, from the interrelation of themes and ideas discussed throughout this thesis, emerged a complex relationship between the teachers' context, knowledge and narrative. Specifically, the discussion shows that context influences the construction of knowledge as seen in Wedell and Malderez (2013), which in turn helps shaping teachers' representations and construction of the context. Both relationships affect teachers' views of classroom interaction.

Also in relation to the context, this study offered a detailed analysis of the data generated in an under-researched context, that of language teaching in Amazonas, Brazil. This, I believe, is a key achievement and contribution to the field, because it gives a voice to teachers whose work and settings are usually overlooked by mainstream Brazilian research, as noted in Chapter 1. The study also creates opportunities for further studies, either in the capital or

in the remote areas of the State, which can focus on the specific contextual influences in the region.

In addition, the data analysis has revealed that teachers' experience and knowledge of their craft are meaningful and fertile sources for research in the social sciences. In relation to the context referred to in the research question above (p. 333), we can say that it (the context) in fact influence the conceptualisation of classroom interaction, but teachers' experience also plays an important role in spite of the setting. Later in this section, I present other key findings of the study.

- *How does teacher knowledge influence the understandings of language teacher cognition in teachers' narratives?*

From the discussion, three main assumptions can be drawn in response to this question. First, the construction of teachers' PPK in this study affected the understanding of teacher cognition which emerges from teachers' narratives. As noted earlier in the last chapter, there is a close interrelation between the notion of PPK and the other three constructs of teacher cognition – thought, beliefs, and decision-making (see Figure 7.2 in the previous chapter). Such a relationship is constructed in such a way that knowledge takes a central and influential place in relation to the other constructs, thus affecting the meaning of the concept of teacher cognition. In other words, the central position that knowledge assumes changes it from being a typical construct of teacher cognition, to evolving into a fundamental construct. Consequently, the understanding of teacher cognition is affected.

Second, the narratives illustrate how teacher cognition can be studied as more than just as a system of mental constructs *per se*. Thus, it can be differently construed in combination with other ideas such as classroom interaction and/or narrative. As noted in Section 7.6, and suggested in the model of narrativised teacher cognition, the notion of teachers' PPK contributes to the understanding of teacher cognition as *teacher cognition of* an idea (e.g., *teacher cognition of classroom interaction*), expanding the construction of the elements of teacher cognition.

Third, the notion of *knowledge of interactional context* can similarly influence the understanding of teacher cognition in this study. As noted in Section 7.2.1, this category of knowledge was integrated into Golombek's (1998) personal practical knowledge (PPK) framework, expanding the construction of teacher knowledge. This category of knowledge includes individual and shared knowledge of the classroom (place and people) and of the EFL teaching practices. In addition, the notion of interactional context can also affect the conceptualisation of *real interaction*, as discussed above. Since the main idea explored is that of teacher cognition *of* classroom interaction, then knowledge of interactional context may also influence the understanding of the concept.

- *How do English teachers articulate cognition of classroom interaction in their narratives?*

In the analysis of teachers' narratives of experience, the notion of teachers' *styles of storytelling* emerged. It developed from the thematic analysis which considered the discursive strategies used by teachers in their narratives.

Section 4.4.5, for example, links the notion of discursive strategies to Tannen's (2007, p. 42) idea of the involvement strategies that speakers use to shape their stories in conversation. Thus, teachers articulate cognition by consciously or unconsciously using individual styles to make their story interesting to engage the listener (or the researcher-as-listener).

Teachers' styles are directly related to the idea of narrative in the sense that teachers narrativise their knowledge and experience. As seen in the analysis, teachers' PPK and experience are evident through their use of metalanguage, their awareness of methodology and contextual influences, and their representations of interaction. Therefore, the teachers' use of strategies such as shared knowledge, evaluation and generalisations, for example, make it possible to construe PPK and experience from their narratives. In the model of narrativised teacher cognition, the notion of teacher's styles of storytelling is mentioned as part of the narrative sphere (or narrative circle in the model) because it emerges from the narratives and influences their interpretations (see the model in Section 7.6.2). Thus, teachers articulate cognition by consciously or unconsciously using individual styles of storytelling to exhibit their personal practical knowledge and experience through discursive strategies.

Teachers' styles of storytelling, I suggest, can be considered to be the heart of narrativised teacher cognition. While the study of discursive strategies in spoken narratives is an established principle, as noted in Section 7.4, analysing multiple interpretations of teachers' voices and those of their students, for example, brought to light how the narrators in fact **live** a

teacher's life and articulate a teacher's mind. Thus, teachers articulate cognition by consciously or unconsciously using individual styles of storytelling to show their emotions and concerns about their experience and to show their love of teaching.

It can be concluded, then, that teachers articulate their mental processes in the narratives through strategic plans, that is, the complex nature of teacher cognition finds a path into words, and consequently, builds meanings. These plans, as mentioned above can emerge consciously or unconsciously in teachers' minds. However, the constructs and ideas become interrelated within the narrative.

In summary, the discussions of the three questions has shown that teachers narrativise their cognition of classroom interaction by using styles of storytelling which engage the listener, display their knowledge, and show their love; that the narratives show teachers' conceptualisation of CI in relation to their teaching context and experience and, among other ideas, CI is described in terms of *realness*; finally, that knowledge plays a key role in the idea of teacher cognition, affecting its understanding in relation to the constructs, to interaction, and to how it is studied (i.e., as teacher cognition of).

Thus, reflecting on the entire research process, I believe that I have learned a considerable amount about the process itself and was inspired by Clandinin and Connelly (2000) and Savin-Baden and Major (2013). I have absorbed much of the notion of teacher cognition and its constructs from Borg (2006), Barcelos and Vieira-Abraão (2010), and Pajares (1992); I have studied the

ideas of classroom interaction, competence, and discourse from Walsh (2006, 2011), McCarthy and Carter (1994) and Tannen (2007); and I have learned a great deal about narrative from Clandinin and Connelly (1995), Toolan (2007), and Labov and Waletzky (1967). I have also learned about the Amazonian context mainly from the teachers. However, I have the feeling that it was not enough. There is still much to learn about teachers' practice, stories and minds.

8.1.2 Strengths and limitations

This study has strengths and limitations. Some of the achievements have already been mentioned in the beginning of this chapter. Therefore, in this section I refer to other aspects.

One of the strengths is that the idea of narrativised teacher cognition (*or teacher cognition of*) in this study can support the understanding of teachers' mental processes in several ways:

- by considering the interrelation between the constructs, as suggested in Chapter 2 and 7, that is, knowledge as a central construct which influences and is influenced by the other three constructs – thought, beliefs and decision-making;

- by recognising the notion of teacher knowledge as personal practical knowledge (PPK) and the sub-areas within it;

- by examining the meanings which emerged from the discursive strategies, as seen in Chapters 5 and 6, that is, by observing the ways teachers articulate their thoughts in words (e.g., voicing students or generalising);

- by observing the elements which make a narrative, as seen in Chapter 3, that is, the structure, the modes, the function, and so on.

Thus, the idea of narrativised teacher cognition can also promote research into the study of teacher cognition, narrative enquiry, language teaching, EFL teacher education, classroom interaction, among other areas.

In terms of limitations, I understand that the interpretations offered in this study are based on the analysed data of nine participants, in a set context, and over a specific period of time. As a researcher I acknowledge that my background knowledge could also have affected the handling and analysis of the data as well as my interpretations of it. One aspect of narratives I learned about from this research process is that narratives need to be read and reread so that the understandings come through. However, I believe that another researcher with different life experience could possibly present different interpretations of the same research data.

In addition, there are questions which were not completely answered. For example, in Section 2.4, whilst exploring CLT principles in relation to classroom interaction, I posed the question: How do teachers offer meaningful interactive opportunities to learners and meet CLT guidelines in specific contexts such as the Amazonian schools? I consider that in the PEC it is possible, but for the public school system I understand that the idea of real interaction is needed to answer this question. I believe that this problem has the potential to become a theme for further enquiries.

8.2 Looking to the future

This study has important practical implications for language teaching and teacher education research because it offers possibilities for development in the field. From the complex topics which have been discussed throughout this thesis the understanding of language teaching, especially in the context proposed, has been extended and enlarged. However, I believe that it can also contribute to EFL teacher education beyond the Amazonian context to Brazilian and global discussions. Thus, this study can have an impact on future research in several ways. For instance, in the replication of its research process in similar or different contexts, in the use of its research methodologies with similar or different samples, and in the exploration of its model of narrativised teacher cognition of classroom interaction in the most diverse educational spheres.

The replication of this study's research process, in part or as a whole, can certainly generate new meaningful outcomes to further the discussion of foreign or second language teaching. Such discussion can focus on similar contexts (as the Amazonian explored here), or in any other non-English-speaking settings, or even in English-speaking countries where English is taught as a second language. Regardless of the contextual situation and sample, it is possible to develop a similar research process to study teacher cognition, classroom interaction, narrative enquiry, language teaching praxis, socio-cultural theories, reflective teaching, among other topics explored in the current study.

The theoretical perspectives explored in this study have narrative enquiry as the main methodological approach to the data analysis, combined with elements of discourse analysis. As noted throughout Chapter 3, Narrative has been developing as an important methodology for understanding teachers' praxis and experience. Thus, I suggest that the idea of narratives of experience are fruitful ways to study the mental processes of teachers engaged in language teaching (as presented in this thesis) and give a meaningful contribution to the field. The results from a different sample could be added up to the results from this thesis and used for the development of language teacher education.

Finally, the model of narrativised teacher cognition of classroom interaction, can be used in distinct educational spheres in view of its various levels or circles which can help teachers express or articulate their praxis. The model aims to make a positive impact in the language teaching field, not only in the Amazonian, but also in the international context. This model can contribute to research, discussions, and the development of language teaching and teacher education in several ways. Here are some suggestions.

In research, it is possible to use the model of narrativised teacher cognition for further investigations either in the same context (perhaps with similar participants), or in different contexts (with different participants, e.g., inexperienced teachers or teachers with similar contextual influences). The idea of having distinct research participants, for example, would certainly prove the model's effect, as a way to promote the understanding of language teaching development. Therefore, language teaching and teacher

development research could use this model of narrativised teacher cognition to consider all its levels (or circles) and their interrelations when formulating new research plans and methodologies.

Also in research, the model can explore and foster the understanding of the effect of contextual influences on the field of teaching EFL, on the narratives of experience produced by the teachers, on teacher cognition of classroom interaction (or of any other foci as mentioned above), and on the teacher cognition constructs and their interrelation to PPK.

The discussions in the field can develop using this model, as well. For example, there is much discussion about the use of narratives in teacher development and the idea of narratives of experience can trigger meaningful considerations, especially if related to the other circles of the model. Also, the idea of PPK can progress and develop to have different meanings depending on the contextual influences which are knowledge generating.

In terms of development in the field, the model of narrativised teacher cognition can be used in teacher training, for instance. Considering the circles in the model, it is possible to organise an effective training process. For example, the narratives of experience can function as a diagnostic tool to help identify the positive points and challenges teachers face and their contexts. Also, from narratives it becomes possible to identify teachers' level of awareness, establish teachers' major needs, and create a successful training course which could have an impact on both individual and group progress, and ultimately classroom practice and learners.

Thus, the model of narrativised teacher cognition can be used to improve the areas of language teaching and teacher development. As with other models, such as Wright and Bolitho's (2007), the model presented here can help language teachers improve their practice from their own perspectives and needs.

In summary, the contributions of this study can be of value to other researchers in the field who can further investigate either the private or public schools, or the topics explored in this study. Certain topics and concerns emerged from this study which are worthy of future plans for research and consideration. Some of these are: an under-researched environment which needs to be investigated to create new enquiries; a challenging setting for teaching, with problems of a large number of students and little time for language classes; established notions of reflective practice for which there is still no evidence of in this context; developing understandings of teacher cognition and PPK, which could be very useful in future studies for teacher development in their specific contexts; and different ways of exploring classroom interaction which can create new opportunities and insights in the field.

In my introduction to this thesis I suggested that the attempt to understand teacher cognition of classroom interaction was a journey to *abstract domains*. I considered that this journey which started in Amazonas, Brazil, could involve many aspects which influenced teachers' lives and therefore, their stories. I also mentioned that this study aimed to investigate language teacher cognition in order to understand its impact on classroom praxis. By

concluding this work I see that today my assumptions and goals are not very different. However, I now acknowledge that the journey was difficult but possible, and this study is the outcome of it in the interpretations which emerged in the course of the research process.

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Appendix 1 English teacher development: national initiatives

PARFOR

In 2009, the Brazilian Ministry of Education (MEC) created a new scheme for public school teachers. It was named PARFOR, or the National Development Plan to Teachers of Basic Education (*Plano Nacional de Formação de Professores da Educação Básica*). PARFOR was created in a joint effort with the Coordination for Higher Education Development (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* – CAPES) (Brasil, 2009). The course is aimed at public school teachers and its main objective is to offer a first or second College degree to teachers working in the basic education levels. This initiative has been, so far, one of the best solutions the Brazilian Ministry of Education has accomplished. PARFOR is attempting to solve an ongoing problem in the public educational system. This problem is that a significant number of teachers do not have a College degree, or have a degree which does not correspond to the subjects they are actually teaching. In broad terms, PARFOR was introduced to support the Secretaries of Education to fix several problems of teacher development and so far it seems to be working as can be seen below.

On the whole, programmes such as e-Proinfo and PARFOR have been taking education and development to distant places in Brazil, especially in Amazonas. They have the potential to create better practice and bring better teaching quality to the public schools. Brazilian government continues to create new programmes. In January 2013, for instance, 534 English teachers from Brazilian public schools travelled to the United States for a six-month development course. This is a joint initiative of CAPES, the Fulbright Commission, and the U.S. Embassy in Brazil and it is evidence that Brazilian government is working to improve foreign language education in the country, but there is still much to do.

** Some of the PARFOR characteristics are: its courses are specifically related to basic school level subjects (Mathematics, Portuguese, English, etc.); it is administered by State or Federal Universities; the courses are only offered in the school breaks (December, January and July) so teachers are able to attend them; to join the course, teachers need to be teaching disciplines related to the course they are applying to.

Appendix 2 Educational structure for basic education in Brazil

The modifications announced in PCN+ mostly affected basic education, in which foreign language is taught. Table 2.1 (below) provides an overview of this basic level education. Levels in grey identify where foreign language teaching is mandatory in the curriculum.

- Basic education is divided in three parts: Infant Education, Primary Education (which is sub-divided into two phases), and Secondary Education.
- From the old to the new structure there were some significant changes:

Terminology: levels named *year* were renamed as *grade*, and the levels named *grade* were renamed as *year*;

Time schedule: infant education was reduced to two levels, and the primary education was enhanced to five (the pre-school became the first year – in italics);

Age: the age range of mandatory education enhanced because now basic education starts at six, instead of seven years old (Brasil, MEC, & SEB, 2006).

For the levels with mandatory foreign language classes (grey fields in Table A) the Ministry of Education determined that the main foreign language would be English for its commercial use in global contexts. This plan does not apply to the *schools of excellence* mentioned in Section 1.4

Table A The educational structure for basic education in Brazil (Drawn from Brazil and MEC 1996, 2001, 2006)

Old structure		Level	Age*	New structure		Level	Age*
	Infant Education	Nursery	0-3		Infant Education	Nursery	0-3
		Kindergarten	4-5			Kindergarten	4-5
		Pre-school	6		Primary Education 1st phase	1st year	6
	Primary Education 1st phase	1st grade	7			2nd year	7
		2nd grade	8			3rd year	8
		3rd grade	9			4th year	9
		4th grade	10			5th year	10
	Primary Education 2nd phase	5th grade	11		Primary Education 2nd phase	6th year	11
		6th grade	12			7th year	12
		7th grade	13			8th year	13
		8th grade	14			9th year	14
	Secondary Education	1st year	15		Secondary Education	1st grade	15
		2nd year	16			2nd grade	16
		3rd year	17			3rd grade	17

* Appropriate or expected age at the level

Appendix 3 Participant consent form (English)

Consent form to be used with prospective participants
PARTICIPANT CONSENT FORM (English version)

Project title: Investigating English Teachers' Conceptualisation of Classroom Interaction in Narratives: Teacher Cognition in an Amazonian Context

Researcher's name: Maristela Barbosa Silveira e Silva
Supervisors' names: Dr Jane Evison; Dr Lucy Cooker

• I have read the Participant Information Sheet, I understand the nature and purpose of the research project, and I agree to take part in it.

• I understand the purpose of the research project and my involvement in it.

• I understand that I may withdraw from the research project at any stage prior to the publication of this study and that this will not affect my status now or in the future.

• I understand that whilst information gained during the study may be published, I will not be identified and my personal results will remain confidential.

• I understand that I will be audiotaped during the interview.

• I understand that the data will be stored only in a digital version, that it will be in the researcher's archives, in her personal computer, and the only people that will have access will be the researcher and her supervisors. I also understand that the files will be erased by the end of 2020.

• I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.

Signed …… (research participant)
Print name …….
Date ……

Contact details
Researcher: Maristela Barbosa Silveira e Silva
Mobile: ------
Email: ttxms56@nottingham.ac.uk or mbs_991@hotmail.com

Supervisor: Dr Jane Evison
Email: Jane.Evison@nottingham.ac.uk

School of Education Research Ethics Coordinator:
educationresearchethics@nottingham.ac.uk

Appendix 4 Participant consent form (Portuguese)

TERMO DE CONSENTIMENTO **(Portuguese version)**

Título do projeto:
Investigating English Teachers' Conceptualisation of Classroom Interaction in Narratives: Teacher Cognition in an Amazonian Context

Nome do pesquisador: Maristela Barbosa Silveira e Silva
Nomes dos orientadores: Dr Jane Evison; Dr Lucy Cooker

• Eu li o Resumo do Projeto, eu entendo a natureza e objetivo da pesquisa e concordo em fazer parte desta.

• Eu entendo o objetivo da pesquisa e meu envolvimento neste.

• Eu entendo que eu posso me retirar do projeto a qualquer momento antes da publicação do mesmo e que esta pesquisa não afetará meu status agora ou no future.

• Eu entendo que quando os dados desta pesquisa forem publicados, eu não serei identificado e meus resultados pessoais permanecerão confidenciais.

• Eu entendo que a entrevista comigo será gravada.

• Eu entendo que os dados serão armazenados somente em versão digital, permanecerão nos arquivos pessoais do pesquisador, que somente o pesquisador e seus orientadores terão acesso aos mesmos. Também compreendo que estes arquivos serão apagados até o final de 2020.

• Eu entendo que eu posso entrar em contato com o pesquisador ou seu orientador se eu necessitar de maiores informações sobre a pesquisa e que eu também posso contatar a Coordenação de Ética na Pesquisa da Faculdade de Educação da Universidade de Nottingham se eu tiver alguma reclamação relativa ao meu envolvimento nesta pesquisa.

Assinado …… (participante da pesquisa)
Nome (letra de forma)...…….
Data ……

Contato:
Pesquisadora: Maristela Barbosa Silveira e Silva
No Reino Unido: Celular: --- No Brasil: Celular: ----
E-mail: ttxms56@nottingham.ac.uk or mbs_991@hotmail.com

Orientadora: Dr Jane Evison
E-mail: Jane.Evison@nottingham.ac.uk

Coordenação de Ética na Pesquisa da Faculdade de Educação da Universidade de Nottingham:
educationresearchethics@nottingham.ac.uk

SCHOOL OF EDUCATION – PGR STATEMENT OF RESEARCH ETHICS

(This form should be used by all students studying for a PhD, EdD, Prof Doc, or MPhil)

Name (Student): Maristela Barbosa Silveira e Silva Supervisor: Dr Jane Evison

Research Topic: Teacher Cognition and Classroom Interaction

The University of Nottingham

	Tick where appropriate
1. I have read and discussed with my supervisor(s) the British Educational Research Association's *Revised Ethical Guidelines for Educational Research* (BERA, 2011).	✓
2. I have read and discussed with my supervisor(s) the *Research Code of Conduct* of the University of Nottingham. For a copy of this document please click here: http://www.nottingham.ac.uk/educationstudentintranet/researchethics/index.aspx	✓
3. I am aware of and have discussed with my supervisor(s) the sections of the *Data Protection Act (1998)* that are relevant to my research study: http://www.hmso.gov.uk/acts/acts1998/19980029.htm.	✓
4. Data gathering activities involving schools and other organizations will be carried out only with the agreement of the head of school/organization, or an authorised representative, and after adequate notice has been given.	✓
5. The purpose and procedures of the research, and the potential benefits and costs of participating (e.g. the amount of their time involved), will be fully explained to prospective research participants at the outset.	✓
6. My full identity will be revealed to potential participants.	✓
7. Prospective participants will be informed that data collected will be treated in the strictest confidence and will only be reported in anonymised form, but that I will be forced to consider disclosure of certain information where there are strong grounds for believing that not doing so will result in harm to research participants or others, or (the continuation of) illegal activity.	✓
8. All potential participants will be asked to give their explicit, normally written consent to participating in the research, and, where consent is given, separate copies of this will be retained by both researcher and participant.	✓
9. In addition to the consent of the individuals concerned, the signed consent of a parent, guardian or 'responsible other' will be required to sanction the participation of minors (i.e. persons under 16 years of age) or those whose 'intellectual capability or other vulnerable circumstance may limit the extent to which they can be expected to understand or agree voluntarily to undertake their role'.	N/A
10. Undue pressure will not be placed on individuals or institutions to participate in research activities.	✓
11. The treatment of potential research participants will in no way be prejudiced if they choose not to participate in the project.	✓
12. I will provide participants with my contact details (and those of my supervisor), in order that they are able to make contact in relation to any aspect of the research, should they wish to do so.	✓
13. Participants will be made aware that they may freely withdraw from the project at any time without risk or prejudice.	✓
14. Research will be carried out with regard for mutually convenient times and negotiated in a way that seeks to minimise disruption to schedules and burdens on participants. (see BERA, 2011)	✓
15. I have considered carefully to what extent, if any, my research might expose me to any kind of risk to my personal safety. I have also discussed this with my supervisor and have taken appropriate steps to respond to any risks identified. Where such a strategy has been agreed a record of it is attached to this submission.	✓

16. At all times during the conduct of the research I will behave in an appropriate, professional manner and take steps to ensure that neither myself nor research participants are placed at risk.	✓
17. The dignity and interests of research participants will be respected at all times, and steps will be taken to ensure that no harm will result from participating in the research.	✓
18. The views of all participants in the research will be respected.	✓
19. Special efforts will be made to be sensitive to differences relating to age, culture, disability, race, sex, religion and sexual orientation, amongst research participants, when planning, conducting and reporting on the research.	✓
20. Data generated by the research (e.g. transcripts of research interviews) will be kept in a safe and secure location and will be used purely for the purposes of the research project (including dissemination of findings). No-one other than research colleagues, supervisors or examiners will have access to any of the data collected.	✓
21. Research participants will have the right of access to any data kept on them.	✓
22. All necessary steps will be taken to protect the privacy and ensure the anonymity and non-traceability of participants – e.g. by the use of pseudonyms, for both individual and institutional participants, in any written reports of the research and other forms of dissemination.	✓
23. Where possible, research participants will be provided with a summary of research findings and an opportunity for debriefing after taking part in the research.	✓
24. Does your research involve (please tick **ALL** that apply): Schools? ✓ Vulnerable Adults? ☐ Children? ☐ **None** of these groups ☐	
25. a) Will your research be conducted in (please tick **ONE BOX** only): UK only? ☐ Outside the UK only? ✓ UK & outside the UK? ☐ b) If outside the UK, please name the country(ies) involved:	
26. FOR ALL STUDENTS UNDERTAKING RESEARCH INVOLVING SCHOOLS, CHILDREN (UNDER 18) AND/OR VULNERABLE ADULTS I have received Disclosure and Barring Service (DABS) clearance ***through the University of Nottingham*** and the School of Education Research Office has the reference number *This applies even when data are collected outside of the UK.* **NB:** All students must remember to apply for their **University of Nottingham** DABS disclosure when they are visiting the UK.	✓
27. FOR ALL NON UK STUDENTS UNDERTAKING RESEARCH INVOLVING SCHOOLS, CHILDREN (UNDER 18) AND/OR VULNERABLE ADULTS. Where available, I have received a Certificate of Good Conduct (or equivalent)* and the School of Education DABS Coordinators have a copy of this**	Obs.

PLEASE SEND AN ELECTRONIC COPY OF THIS FORM, COPYING IN YOUR SUPERVISOR, WITH SUPPORTING DOCUMENTATION TO EDUCATIONRESEARCHETHICS@NOTTINGHAM.AC.UK . IF YOUR SUPERVISOR IS COPIED IN WE WILL TAKE THIS AS PROOF THAT THEY HAVE SEEN AND APPROVED YOUR APPLICATION (THEREFORE A SIGNATURE ON THIS FORM IS NOT NECESSARY)

* Countries that produce a Certificate of Good Conduct are: Australia, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Irish Republic, Italy, Jamaica, Latvia, Malaysia, Malta, Netherlands, New Zealand, Philippines, Poland, South Africa, Spain, Sweden & Turkey.
** UK students who have lived in one of the above countries for 6 months or more may also need to apply for one of these.

Please provide further information below in relation to any of the above statements which you have not been able to tick, explaining in each case why the suggested course of action is not appropriate (continue on a separate sheet if necessary):

9. (N/A) The participant teachers are adults expected to be older than 21 years old.

28. (Obs.) I have applied to the Disclosure and Barring Service (DABS) clearance ***through the University of Nottingham*** and the School of Education Research Office and I am waiting for the reference number.

Please outline any areas of research ethics related risk, which have not been referred to above, associated with your research, and how you intend to deal with these (continue on a separate sheet if necessary):

NONE(N/A to Checklist number 5)
Only schools in safe areas of Manaus will be visited. Consequently, there will be no potential risks to the researcher's personal safety.

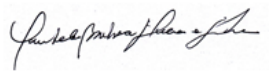
Checklist:

Please check that you have attached 1 – 4 (& 5 where appropriate) and return with the form to the Postgraduate Research Students Office

(1) a brief statement of my research aims or questions and proposed methods of data generation (maximum 200 words);	✓
(2) a brief statement of how I plan to gain access to prospective research participants;	✓
(3) a draft information sheet to be provided to prospective participants;	✓
(4) a draft consent form to be used with prospective participants;	✓
(5) a record of the agreed strategy between myself and my supervisor(s), identifying any potential risks to my personal safety, and stating how these will be addressed during my research study. (Only needed where researcher safety issues identified)	N/A

NB Please do NOT include copies of research instruments (e.g. questionnaires).

PLEASE SEND AN ELECTRONIC COPY OF THIS FORM, COPYING IN YOUR SUPERVISOR, WITH SUPPORTING DOCUMENTATION TO EDUCATIONRESEARCHETHICS@NOTTINGHAM.AC.UK . IF YOUR SUPERVISOR IS COPIED IN WE WILL TAKE THIS AS PROOF THAT THEY HAVE SEEN AND APPROVED YOUR APPLICATION (THEREFORE A SIGNATURE ON THIS FORM IS NOT NECESSARY)

Signed (student)  Print Name (Student) Maristela Barbosa Silveira e Silva Date 20/01/2014

Signed (supervisor 1)_____ Print Name (supervisor 1) Dr Jane Evison Date

Signed (supervisor 2, where appropriate) _____ Print Name (supervisor 2, where appropriate) Dr Lucy Cooker Date

PLEASE SEND AN ELECTRONIC COPY OF THIS FORM, COPYING IN YOUR SUPERVISOR, WITH SUPPORTING DOCUMENTATION TO EDUCATIONRESEARCHETHICS@NOTTINGHAM.AC.UK . IF YOUR SUPERVISOR IS COPIED IN WE WILL TAKE THIS AS PROOF THAT THEY HAVE SEEN AND APPROVED YOUR APPLICATION (THEREFORE A SIGNATURE ON THIS FORM IS NOT NECESSARY)

2013/ /JG

School of Education – Research Ethics Approval Form

The University of Nottingham

Name	Maristela Barbosa Silveira e Silva
Main Supervisor	Dr Jane Evison
Course of Study	PhD
Title of Research Project:	Teacher Cognition and Classroom Interaction

Is this a resubmission No Date statement of research ethics received by PGR Office: 22.01.14

Research Ethics Coordinator Comments:

I have read all the documents accompanying this submission and I am satisfied they meet the requirements for ethics approval.

Observation:
I would suggest adding the title of the project to the Participant Information Sheet (for both pilot and main study) and a translation of the title to the Portuguese versions.

I consider this research to be above minimum risk ☐

Final responsibility for ethical conduct of your research rests with you and your supervisor. The Codes of Practice setting out these responsibilities have been published by the British Educational Research Association (BERA) and the University Research Ethics Committee.
http://www/educationstudentintranet/researchethics/index.aspx http://www.bera.ac.uk/publications/Ethical%20Guidelines *If you have any concerns during the conduct of your research then you should consult those Codes of Practice and refer again to the School of Education's Research Ethics Committee.*

Independently of the Ethics Committee procedures, supervisors also have responsibilities for the risk assessment of projects as detailed in the safety pages of the University web site. Ethics Committee approval does not alter, replace, or remove those responsibilities, nor does it certify that they have been met.

Outcome:
Approved √ Revise and Resubmit ☐

Signed: Name: Dr J. Gimenez (Research Ethics Coordinator) Date: 24.01.2014

Appendix 7 Examples of Interview Themes

The semi-structured and sociolinguistic interviews aimed to give the teachers the chance to hold the floor in the conversation (see Section 4.3.1).
The main topics explored during the interviews were as follows:

Decisions to become a language teacher: motivated teachers to think about topics such as teachers' origins (some of them are not from Manaus), the different reasons they chose to teach English, as well as their family, school, city, job opportunities, etc.

Teacher education: encouraged topics such as language schools, higher education degrees, seminars and conferences attended, and future plans.

Teaching background: provoked their reflection on places they worked at, people who influenced them, students, and other especial moments such as presenting at a conference, developing projects with students, or teaching a short course.

Current educational context: motivated teachers to talk about the school environment they were inserted in at that moment. They also talked about peer teachers, students, their work, likes and dislikes in their actual context.

Teachers' routines: provoked their thoughts on everyday life inside and outside the classroom, the schedule they have, their students and levels they teach.

Teachers' experiences in the classroom: encouraged teachers to enter their classroom and describe activities, remember effective and challenging moments, and talk about their students' attitudes in class.

Classroom interaction: motivated teachers to define, describe and exemplify classroom interaction in their own context.

Use of L1 and L1 in interaction: provoked thoughts about their overall practice, interactive activities, actions and reactions in class in relation to language.

Reflective teaching: motivated topics such as teachers' awareness of their practice, expectations, and their classroom. There was a question about it which was asked to all teachers: 'Can you remember any moments in your classroom which trigged reflection about your teaching practice? Please, talk about it/them.'

As expected, there were many moments of reflection, thoughts and beliefs about all the themes. Also teachers' knowledge emerged in their stories in a natural flow. Other subsequent questions were asked in order to clarify any subject mentioned by the teacher in the interview.

Appendix 8 Narrative Tasks: Teacher Maria Prompts

Project title: Investigating English Teachers' Conceptualisation of Classroom Interaction in Narratives: Teacher Cognition in an Amazonian Context
Researcher: Maristela Silva – PhD student – University of Nottingham

Narrative Task
Write or talk about a narrative (tell a story) to respond to the task below. Be as clear as possible. Remember you can choose the language you wish to write (either Portuguese or English, or a combination of both). Provide examples and details to illustrate your point of view. Please, avoid using students' names. If you need to talk about or cite them, please use nicknames or codes (e.g., student 1).
As this is your first narrative task, please, feel free to ask any questions you have about procedures or content.

Read the story about teacher Maria's class and then try to follow the guidelines below.

TEACHER MARIA PROMPT 1

Teacher Maria *planned an interactive activity in which students needed to ask each other about likes/dislikes. Before they interacted, students prepared a list of activities and things they liked and disliked to share with their peers during the interaction. However, while performing the activity, students would not use the vocabulary and grammar expected to their level and would sometimes use the mother tongue. Teacher Maria quickly thought about a way to fix that and gave students a similar activity to perform, expecting that this time they would use appropriate language skills. It did not work either.*

Discuss the following:
Why do you think the activities did not work as planned?
What would you have done differently if you were in Maria's place?

Now, reflect about your own practice (in relation to Maria's case) and tell your own story.
Have you ever had a similar situation in your practice? (describe the situation)
What did you do? (talk about the steps)
What were the outcomes?
Why do you think things worked well / did not work well?
Add any other details you wish to.

Report 1: (optional activity)

Audio record (or take notes of) a moment of your class in which students are performing an oral interactive activity (with each other and/or with you) – **using the target language**.
Choose any level or group you wish to record.
Write a **detailed report** of this moment describing:
the activity you planned; (grammar, vocabulary, listening, etc)
how you managed the class to develop the activity; (written / oral instructions)
if students were able to reach the outcomes you expected;
how well your students produced in the target language; (accuracy / fluency)
how you justify your actions and reactions;
any other details you wish to add.

Please, send your narrative and report to (….) Thank you.

Project title: Investigating English Teachers' Conceptualisation of Classroom Interaction in Narratives: Teacher Cognition in an Amazonian Context
Researcher: Maristela Silva – PhD student – University of Nottingham

Narrative Task
Write or talk about a narrative (tell a story) to respond to the task below. Be as clear as possible. Remember you can choose the language you wish to write (either Portuguese or English, or a combination of both). Provide examples and details to illustrate your point of view. Please, avoid using students' names. If you need to talk about or cite them, please use nicknames or codes (e.g., student 1).
As this is your first narrative task, please, feel free to ask any questions you have about procedures or content.

Read the story about teacher Maria's class and then try to follow the guidelines below.

TEACHER MARIA PROMPT 2

Teacher Maria *planned an interactive task in which students needed to find out how many students in class could ride a bike, swim and cook well. Students interacted well, but many of them were using their mother tongue (Portuguese) instead of the target language (English). However, at the time they needed to report their outcomes back to the class, they were able to speak in English.*
Obs.: Teacher Maria has 40 students in her class, age 15-17.

Discuss the following:
Why do you think the activities did not work as planned?
What would you have done differently if you were in Maria's place?

Now, reflect about your own practice (in relation to Maria's case) and tell your own story.
Have you ever had a similar situation in your practice? (describe the situation)
What did you do? (talk about the steps)
What were the outcomes?
Why do you think things worked well / did not work well?
Add any other details you wish to.

Report 1: (optional activity)

Audio record (or take notes of) a moment of your class in which students are performing an oral interactive activity (with each other and/or with you) – **using the target language**.
Choose any level or group you wish to record.
Write a **detailed report** of this moment describing:
the activity you planned; (grammar, vocabulary, listening, etc)
how you managed the class to develop the activity; (written / oral instructions)
if students were able to reach the outcomes you expected;
how well your students produced in the target language; (accuracy / fluency)
how you justify your actions and reactions;
any other details you wish to add.

Please, send your narrative and report to (….) Thank you.

Appendix 9 Prompts for Focus Group Discussions

1st Focus Group Discussion - Prompts

- In your opinion, what is interaction?
- In the classroom, what is the difference between interaction in Portuguese and interaction in English?
- What is the difference between interaction and speaking?
- Is interaction essential to trigger learning? Why? (Why not?)
- What is the difference between interaction Student-Student and interaction Student-Teacher?
- How often do you make changes to your plans during a lesson? Why does this happen?
- How often is Portuguese allowed in your class? Why?
- What happened in your last class that made you reflect about your practice?
- What positive things happened in your last class?
- What are the best ways to organize students' desks in the language classroom?
- Do you think that during a lesson teachers should find a balance between individual work and pair/group work? Why? (Why not?)
- Do you think that research in the classroom environment can help enhance new methods and methodologies in the field?
- Anything you would like to add?

2nd Focus Group Discussion - Prompts

- What is it to be an English teacher in Brazil? And in Manaus?
- In the classroom, what are the most important actions a teacher needs to take?
- During a lesson I usually .....
- During a lesson I never .....
- What things trigger your reflection about classroom practice?
- Anything you would like to add?

Appendix 10 Example of episodes of narrative

Eduardo Int. 2 (translated to English)

Question: So, you used Portuguese during the lesson you described. Right? How do you balance the use of both languages in your own view?

Eduardo's response:

Episode: How he balances the use of L1 and L2
I think that this is interesting. I use to guide myself in this sense..., I think that there is a feeling of comfort zone. Right at the beginning of a lesson, for example, sometimes during an instruction... ahn...the beginning of an activity...and I am giving instructions...sometimes I do not waste time in instructions in English because I want to get to the results that will prepare me to another result, which will give me some basis to that. Then, sometimes, when I am in a hurry to prepare the basis, I speak Portuguese with students. I present something from the guidelines of the activity. Then, when they notice that they know how to use that in English, or they learn that in English, then I switch and do not use Portuguese anymore. So, it is a little…it's fast.

Episode: How children of different levels react to both languages
At the beginning we can use L1, but like that…as soon as they feel 'oops I already know how to say *this*, then I won't speak *this* in Portuguese anymore.' Then, I monitor students...I walk all the time around the desks or in the semi-circle to check if they are really using English. And with the children I think it's fantastic how they get motivated to really use [the language]. They get happy of speaking English. Today with my 2nd year [English course, children group], for example, I put them to speak in English, really, the whole class, since the **good morning** until the **good-bye**. And I could hear them saying 'Wow, today the teacher is speaking English all the time' and they little eyes were shining because they wanted to understand. They wanted to try to understand everything, and not lose absolutely anything. But they are 2nd year, so they already have a better background knowledge, more solid, I can be challenging with them. However, with the 1st-year children, I don't feel as safe to be assertive in the use of English, because I am afraid of scaring them away, of them not understand or feel uncomfortable, somehow, with that topic.

Episode: How he convinces students to use the target language
So, first I convince them that to talk about *that* is nice using L1 *'então, o que a gente tá vendo aqui?'* [question in asked in Portuguese = So, what are we seeing here?]. Then, they start to talk. Then I say, 'look this term is like that in English and we are going to use it to speak English now.' Then, I repeat, do repetition and then from then on, when they were going to talk about it, they will speak in English. They won't need to speak in Portuguese, unless they have any questions. And then they ask: 'How is *this* really, teacher? How to pronounce *this*? What's the meaning of *this*?' Sometimes, in a moment such as this I do not demand that they ask me 'teacher, how can I say this?' No. Classroom language is also important, sometimes…supports the student to do it, but I don't think this is so fundamental.

Episode: How he tries to do it naturally
Sometimes, when we force them too much, they feel like they have to use it [the language]. Sometimes they don't want it, it's more natural, when they don't remember [a word] they use Portuguese. So, sometimes I ask them to say that in English, sometimes I don't. Other times I only say 'OK,' but then my response is in English. My response is in English in these cases. And then they notice that next time they come and say that phrase in English.

Eduardo Int. 2 (analysis in the original language - Portuguese)

Question: So, you used Portuguese during the lesson you described. Right? How do you balance the use of both languages in your own view?

Eduardo's response:

Episode: How he balances the use of L1 and L2
Eu acho isso uma coisa interessante. Eu costumo me guiar nesse sentido pelo..., eu acho que tem um feeling de zona de conforto. Logo no início de uma lição, por exemplo, às vezes uma instrução... uma... um início de uma atividade... e eu to dando a instrução... às vezes eu não perco tempo dando instrução em inglês porque eu quero chegar logo ao resultado que vai me preparar para um outro resultado, que vai dar alguma base para aquilo. Então às vezes quando eu to com mais pressa de preparar a base, eu falo em português com eles, apresento alguma coisa da instrução da atividade e aí quando eles percebem que eles sabem usar aquilo em inglês, ou eles aprendem a coisa em inglês, aí eu já mudo e não uso mais português. Então é meio que... é rápido.

Episode: How children of different levels react to both languages
O início pode ter a presença da língua 1, mas assim, logo que eles se sentem "opa eu já sei falar isso, então eu não vou mais falar isso em português." E aí eu fico monitorando... eu to o tempo inteiro andando entre as mesas ou no semicírculo pra conferir se eles estão realmente usando a língua inglesa. E com as crianças eu acho magnífico como eles se empolgam em usar, realmente. Eles ficam felizes de tá falando inglês. Hoje com os meus 2º. Ano (crianças), por exemplo, eu coloquei pra falar inglês mesmo, a aula inteira, desde o good morning até o good-bye, e eu ouvia eles comentando "nossa, mas hoje o teacher tá falando em inglês o tempo inteiro" e o olhinho deles brilhava porque eles queriam entender, eles queriam tentar entender tudo, não perder absolutamente nada. Mas eles já são 2º. ano, então eles já tem um background mais preparado, mais solidificado. Eu posso ser mais desafiador com eles, mas com o 1º ano Kids eu já me sinto mais inseguro de ser tão assertivo com o uso da língua inglesa porque eu tenho medo de amedronta-los, de eles não entenderem ou se sentirem, de alguma forma, desconfortáveis com aquele assunto.

Episode: How he convinces students to use the target language
Então eu primeiro convenço eles de que falar sobre aquilo é legal, talvez usando a língua 1..."então, que que a gente tá vendo aqui?" Aí eles começam a falar. Aí eu digo: "olha, essa palavra é assim em inglês e a gente vai usar ela pra falar sobre isso agora." Aí eu repito, faço a parte do repetition e aí, a partir disso, quando eles forem falar sobre aquilo, eles já vão conseguir falar em inglês. Não vão mais ter a necessidade de falar em português, a não ser que ele tenha alguma dúvida e aí ele questione: "como é que é isso aqui mesmo, teacher? Como é a pronúncia? O que isso significa?" Às vezes esse momento, também, eu não faço muita questão que eles digam: "teacher, how can I say this?" não. O classroom language também é importante às vezes... dar um reforço para que o aluno às vezes faça isso, mas eu nem acho que seja tão primordial assim.

Episode: How he tries to do it naturally
Às vezes, quando a gente força muito, ele se sente obrigado a usar. Às vezes ele não quer, é mais natural, às vezes ele não lembra e aí ele usa. E aí às vezes eu lembro e peço pra ele falar em inglês de novo, mas às vezes não. Às vezes eu só digo: "OK," mas aí a minha resposta é em inglês. A minha resposta é em inglês nesses casos. E aí ele percebe e aí da próxima vez ele já vem e fala aquela frase em inglês porque percebeu que eu respondi em inglês.