



**SECOND LANGUAGE MICRO-DEVELOPMENT OF AN
ENGLISH LEARNER OF CHINESE: A SOCIOCULTURAL
CASE STUDY**

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Declaration

I hereby certify that this thesis is based on my original work. All the quotations and citations have been duly acknowledged. I also declare that this thesis has not been previously or currently submitted for any other degree at Newcastle University or other institutions.

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Abstract

Compared to many well-researched European languages, the research on the teaching and learning of Chinese as a second/foreign language is far from adequate. The existing literature has focused intensively on the acquisition of the linguistic properties of Chinese, while fewer studies have focused on interactions in L2 Chinese classrooms. This sociocultural case study seeks to address this gap by examining the dynamic interaction between one English learner of L2 Chinese and the teachers in a UK university. More specifically, this study provides insights into how mediation is carried out in this particular context.

Drawing on sociocultural theory (Vygotsky, 1978), and the construct of affordance in the ecological view of language teaching and learning (van Lier, 2000), this study examines 24 hours of classroom interaction recorded over two months in an L2 Chinese classroom in a UK university. A qualitative single case study design is chosen to uncover one particular learner's language learning process in depth. Employing the microdiscourse analysis approach (van Compernelle, 2013, 2015), by focusing on the mediation sequences in interaction, the video- and audio-recordings of classroom interactional data are scrutinised.

The findings suggest that in this classroom, mediation is processed by the language teachers and learners through the contingent use of a variety of linguistic, interactional and semiotic resources. These resources are interconnected and function in interactional practices such as scaffolding and co-regulation, create an affordance-rich interactional context in different teaching and learning activities. The findings also reveal that through the appropriation of mediational assistance, the learner demonstrates an emergent L2 linguistic development and L2 interactional competence. Based on the research findings, this study makes suggestions concerning the teaching of L2 Mandarin Chinese and the training of L2 Chinese teachers. In particular, for future research, the study recommends a shift of attention from the teaching of specific linguistic components of the L2, to the pivotal role of mediation and its dynamics in the language classroom. The findings of this study contribute to the existing literature of L2 classroom interaction and the interactional organism and mediational mechanism of the L2 Mandarin Chinese classroom, broaden the empirical database of L2 teaching and learning.

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Abbreviations

SLA	Second Language Acquisition
SCT	Sociocultural Theory
L2	Second Language
L1	First Language
ESL	English as a Second Language
EFL	English as a Foreign Language
CSL	Chinese as a Second Language
CFL	Chinese as a Foreign Language
ZPD	Zone of Proximal Development
SISR	Self-Initiated Self-Repair
CA	Conversation Analysis
CS	Code-Switching
DMs	Discourse Markers
IC	Interactional Competence
CIC	Classroom Interactional Competence
DIU	Designedly Incomplete Utterance

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Chapter 1. Introduction

In this introductory chapter, the overview of the study will be presented. First, it explores the background and rationale of the study. Then in the subsequent sections, the research focus and the particular research question will be elaborated. Finally, the chapter outlines the structure of the thesis.

1.1 Background: teaching and learning Mandarin Chinese in the UK

According to Duff (2008), Mandarin Chinese education is now becoming a heated research area since the needs of learning Mandarin Chinese are shifting from literary, political, and historical scholarship to a much wider range of purposes, including communication, travelling, academic study as well as diasporic heritage learning in the world. Take the UK in specific, before the 2000s, the teaching of Chinese has a long history but stays peripheral as it is largely confined in the Chinese diasporic communities and modern language programmes in a limited number of universities. The picture has been changing, as diverse courses of Mandarin Chinese become available in formal educational settings as well as in public and private adult professional institutions (Zhang and Li, 2010). The shift of language policy in the UK, and learners' changing perceptions to value the economic and instrumental value of the minority languages such as Mandarin Chinese, consequently resulting in the increasing provision of Mandarin Chinese in the country (Pérez-Milans, 2015).

In the UK, at the tertiary level, Liu (2012) reports that 23 universities were teaching Mandarin Chinese in 2012. The language is offered in different forms, including single honours, joint honours, and non-credit-bearing courses. Among those forms of provision, single honours Chinese is usually offered in a very limited number of universities in the UK, such as Oxford, Cambridge, the School of Oriental and African Studies (SOAS), Edinburgh, Leeds, etc. (Zhang and Li, 2010; BACS, 2017). While the total number of language students in the UK universities drops in 2004, the number of Chinese student sees an increase of 14% (Joy 2004, as cited in Zhang and Li, 2010). Also, according to Zhang and Li (2010), in 2008, the student in-take for Mandarin Chinese at SOAS has an increase of around 60% than the previous year.

Compared to the scarce number of single honours Chinese programmes in UK universities, there are more joint honours programmes involving Mandarin Chinese. Moreover, those programmes are gaining popularity with increasing student enrolment (ibid). According to the bulletin reports from the British Association for Chinese Studies (BACS, 2015, 2016, 2017), In the University of Edinburgh, the undergraduates who study Chinese and China-related modules reached an unprecedented number of 198 in the academic year 2015/16. This number kept growing into a new peak of 211 in 2016/17. The University of Birmingham also claims stable and year-on-year increases in numbers of undergraduates in Chinese and Chinese studies. In the Open University, Beginner's Chinese has been offered since 2009. Until 2015, over 1,600 students had registered for the module. In 2016, more than 200 students joined the module, while the total number of students from 2009 to 2017 reached over 1,950. The statistics from the Open University demonstrate an increasing learner interest over the years. In 2015, the student recruitment of Chinese degree programmes at the University of Central Lancashire outnumbered that of the European languages for the first time. In addition to the provision of degree programmes involving Mandarin Chinese, many UK universities also provide Chinese through the language-for-all courses, usually in collaboration with the university language centres or Confucius Institutes (Zhang, 2014; BACS, 2017). For example, Newcastle University, from 2015, starts to offer Mandarin Chinese through the free non-credit-bearing University-Wide Language Programmes (UWLP) to all students and staff, although the UWLP Chinese only offers beginner level courses.

In North America, Chinese has become the third most widely spoken language in both the United States and Canada, it is deemed as a valuable community language and a language for international communication (Duff, 2008). With a large number of heritage learners of Chinese in the United States, the instructional methods, materials and programmes offered need to be carefully considered to meet the needs of heritage learners (Duff, 2008b; Li and Duff, 2008). The National Security Education Programmes (NSEP) in the United States, from the perspective of national security, lists around 60 languages including Chinese, to have top

critical value (Zhang, 2014). In Europe, minority languages such as Chinese and other Asian languages are considered as part of the parcel of European Union's multilingualism and multiculturalism strategies to promote mobility, employability and social/community cohesion (Zhang, 2014; Pérez-Milans, 2015). Differing with North America and Europe, the UK's policy and approach to the teaching and learning of Chinese is a more pragmatic one, which considers the language has economically strategic value (Zhang, 2014) as an instrument to promote and advance business interests (Zhang and Li, 2010).

The development of Chinese language teaching at the tertiary level and learners' demands in the UK is the result of China's economic growth (Duff, 2008; Zhang, 2014) and UK's pragmatic policy of its relationship with China. It is reflected in the provisions and arrangements of joint honours degree programmes involving Chinese in universities and diverse language courses in private learning institutions. For instances, Zhang and Li (2010) find out that the most common and popular joint honours in universities are those combine Chinese with business studies. In the University of Westminster, half of its recruitment to undergraduate Chinese courses in 2016 were the students from Business School (BACS, 2016). In some university language centres and private institutions, professionally specific courses such as business Chinese and legal Chinese are in high demand. Most of the students of these courses are employers from government departments or business institutions that have relations with China (Zhang and Li, 2010). Thus, it can be concluded that in the UK, economic and political drives determine the learners' special needs of learning the language. Specific courses and activities that address and focus on the business, political and cultural activities pertinent to Chinese language and culture need to be designed and executed urgently in universities and institutions.

With the profound observation and understanding of Chinese language teaching in the UK, Zhang and Li (2010) discuss and reflect on the existing issues and challenges in teaching and learning of Chinese in this particular context. The first issue is the lack of adequate syllabus and examination procedure, partly due to the late introduction of the language to school

curriculums. Second, the research and debate about the actual teaching and learning of Chinese as a foreign language have stayed insufficient, although there are numerous second language acquisition (hereafter SLA) studies about the acquisition of Chinese linguistic features (see Section 2.7). The lack of empirical research and evidence directly links to the next problem of lacking adequate teaching materials which should be catered to the aforementioned special needs of British learners and context. In addition, the number of qualified and experienced Chinese teachers in UK schools, universities and institutions is limited, which largely constrains the development of the teaching and learning of the language in the particular contexts in the UK.

The above-listed issues demonstrate that the research on teaching and learning of Mandarin Chinese in the UK, compared to many well-researched European languages, is an under-researched area from a range of aspects (Pérez-Milans, 2015). Since Mandarin Chinese courses are gaining momentum in the UK, to tackle these issues, there are urgent needs for researchers in SLA, applied linguistics, and education, to provide empirical and theoretical research and evidence to improve the understanding of the Chinese classrooms, thus to offer improvements and solutions for the better quality of teaching and learning of Mandarin Chinese.

1.2 Research rationale

The current study is informed and inspired by Vygotsky's sociocultural theory (hereafter SCT). SCT has been posing significant influence in the field of education and applied linguistics in emphasising how social interaction impacts upon language learners' learning and development. An important notion of SCT is that the sociocultural settings of learning and education are essential and determining factors in the development of the higher order functioning of human mentality (Vygotsky, 1978). Among several constructs, the central tenet of SCT is mediation. Vygotsky has argued that human behaviours are always mediated by physical and symbolic tools and involve the 'knowledgeable other' (Swain and Lapkin, 2002; Baleghizadeh, Memar and Memar, 2011). Learning, as mediated by diverse cultural artefacts

(Lantolf, 2000), has been deemed as a social event taking place as the result of the interaction between participants of activities and environment. Therefore, the sociocultural perspective of second language learning pays primary attention to the crucial role of the interaction between teachers and learners. It is through the process of mediation, the external-social and internal-psychological learning process is connected (Frawley, 1997; John-Steiner, 2007). Among the diversity of physical and mediational means available in learning contexts, language is the most prominent mediational tool and resource (Lantolf, 2000c; Lantolf and Thorne, 2006). Through the language use in interaction, learners and teachers interact, negotiate and modify learning experiences.

SCT encompasses several constructs, such as mediation, the Zone of Proximal Development, regulation, internalisation, private speech, etc. These constructs help to provide a robust account to understand and explain the emergence of learning and development. A sociocultural approach to second language (hereafter L2) teaching and learning, often takes an in-depth and critical view towards the quality of teacher-learner interaction (van Compernelle, 2015). The theory has inspired researchers in different branches of SLA and applied/educational linguistics.

There already exist diverse research which employed different constructs of SCT to investigate the language teaching and learning (e.g., Aljaafreh and Lantolf, 1994; Ohta, 1995; Antón, 1999; Antón and DiCamilla, 1999; Hudson, 2011; van Compernelle, 2010; Lugendo, 2014; Black, 2007; Anani Sarab and Gordani, 2015). A majority of these SCT-informed research are conducted in the context of English as a second/foreign language (ESL/EFL) (e.g., Aljaafreh and Lantolf, 1994; Antón and DiCamilla, 1999; Hudson, 2011; Lugendo, 2014). Only a limited number of research focus on language classrooms other than English, such as L2 Japanese (Ohta, 1995), L2 German (Walter and van Compernelle, 2015) and L2 French (Van Compernelle, 2011; van Compernelle and Williams, 2012; van Compernelle and Kinginger, 2013). Hence, it can be seen that SCT and its pedagogical implications for language teaching and learning are not new in ESL/EFL contexts. Unfortunately, the

integration of SCT in the domain of teaching Chinese as a second/foreign language (CSL/CFL) contexts is still rare. To my knowledge, a very limited number of studies with the perspective of sociocultural theory has been conducted in CSL/CFL contexts (see Section 2.7). Under these circumstances, this research gap attracts the researcher to employ SCT to investigate classroom interaction and the learner's L2 development in a CFL classroom in the UK.

The issues regarding the teaching and learning of Chinese in the UK mentioned in the previous section, along with the insufficient incorporation of SCT in this particular field, provoke the researcher to study the teaching and learning of Chinese in a British university within the sociocultural framework. The primary goal is to gain the empirical evidence to understand the unique features of L2 Chinese classroom in the UK, and to contribute to the database of the teaching and learning of Chinese in CFL contexts in general.

1.3 Research focus and research question

As discussed above, guided by SCT principles, this study is particularly interested in how the interaction serves the mediational functions to learning activities in a particular context. The main purpose of this research, first, is to investigate how the learning process is mediated through classroom interaction. In the multilingual and multicultural context of L2 classroom, the detailed investigation of the interaction between teachers and learners are capable of giving sufficient clues to the role of sociocultural constructs and shedding some light on our understanding of L2 learning process and development.

SCT does not only focus on teachers' role as more knowledgeable others and mediators, but also emphasises the active role of learners (Verenikina, 2008). The SCT constructs of regulation, self-regulation (see Section 2.3.3), internalisation (see Section 2.3.4) and private speech (see Section 2.3.6) highlight the conceptualisation that the fulfilment of development first depends on the mediation from experts in interaction at the social plane; then at the psychological plane, learners need to be competent to realise, internalise and finally

externalise the mediational means and resources. As a result, the second purpose of this research is trying to find out that within the Zone of Proximal Development, how the language learner in the particular context reacts upon the mediational means provided towards the potential L2 development.

According to the research gaps and focus elaborated in the previous sections, the overall research question posed by this case study is thus:

How is learning mediated in a Chinese as a foreign language classroom in a UK university?

In order to answer this research question, this study is posited in a beginners' L2 Chinese classroom in a UK university. The study observes, identifies and analyses the mediational processes between one L2 Chinese learner and the teachers in this CFL classroom. Through the scrutiny of the classroom interaction data, the study reveals how the mediational resources and means are contingently deployed and managed to facilitate the focal learner's L2 learning and his emergence of L2 development.

SCT is employed in this study first as a theoretical framework to guide the understanding of learning and interaction. Second, it is used also as an analytical framework to apply the theoretical constructs of SCT in action to analyse and explain L2 teaching and learning. Vygotsky has proposed the genetic method within SCT for investigating the developmental process (Vygotsky, 1962, 1978; Lantolf, 2000a; Lantolf and Thorne, 2006). At the practical level, this study has adopted the microdiscourse analysis approach (van Compernelle, 2013, 2015). With an emic perspective to the data, the analysis identifies and analyses the mediation sequences through which the mediational means and resources are managed locally to enact affordances (van Lier, 2000, 2004, 2008b) and learning opportunities (Walsh, 2011; Walsh and Li, 2013) in the language classroom.

1.4 The organisation of the thesis

This thesis is composed of seven chapters. Other than the introductory chapter, the remainder of the thesis is organised as follows:

Chapter 2 will extensively review the literature on Vygotsky's sociocultural theory. Starting with the overview of SCT, the role of interaction and the relationship between SCT, language, interaction and L2 development will be elaborated. In this chapter, the SCT constructs that are relevant to the present study, and the existing literature regarding these constructs will be critically discussed. Additionally, the semiotic resources such as the first language (hereafter L1) and gestures which play important roles as mediational resources in classroom language teaching and learning are also thoroughly reviewed.

In chapter 3, Vygotsky's genetic method at the macro level, and the data analysis approach – the microdiscourse analysis at the micro level are explained. The present study adopts a single case study approach, the rationale of this choice will also be elucidated. In addition, the detailed research design of this research, including ethical issues, data collection, sampling and other relevant issues are presented in detail.

Chapter 4 focuses on the analysis of the classroom data. Relies on the detailed classroom interaction transcripts of mediation sequences, the analysis unveils, through the contingent use of a variety of mediational resources, how the mediation is carried out in particular classroom activities. In Chapter 5, with the examples of the learner's L2 micro-development, the data analysis focuses on how the mediation provided by the teachers and peer learners in the classroom interaction facilitates the particular learner's L2 learning, contributes to his L2 microgenesis. Based on the detailed scrutiny of data, Chapter 6 further interprets and re-examines the research findings in relation to the existing literature in the field. Also, some implications of the findings towards the L2 Chinese classroom pedagogy are discussed.

Lastly, the thesis concludes with Chapter 7, in which the limitations and potential contributions of this study are stated. Furthermore, the research findings from the present research make recommendations for future relevant studies.

Chapter 2. Literature review

2.1 Introduction

This chapter reviews sociocultural theory (SCT) in general, the constructs of SCT, and their relevance to L2 learning and development in previous studies. In addition to the SCT constructs, other perceptions and notions which are relevant to this study have also been critically reviewed.

This chapter is composed of seven sections. Section 2.2 gives an overview of SCT, with the elaboration of the role of interaction and language in SCT perspective of L2 learning and development research. Section 2.3 focuses on the particular constructs of SCT and the relevant frameworks which are salient to the current research, namely the Zone of Proximal Development, scaffolding practices, regulation, internalisation and its mechanism, and the last, private speech. Section 2.4 shifts the attention to the ecological view of L2 learning, which is closely related to SCT; and the notion of affordance which guides the analysis of the data in the subsequent chapters. Considering the nature of the context—a beginners' L2 Chinese classroom, the L1 is seen as an unneglectable resource for learning, hence Section 2.5 reviews the perceptions and approaches towards the use of L1 in L2 classrooms. As the non-verbal element is also an indispensable part of semiotic mediation, Section 2.6 lays the focus on gestures used by teachers and its relations to learners' learning and understanding of mediation. The final section reviews some of the recent research on teaching and learning in various L2 Mandarin Chinese contexts.

2.2 Sociocultural theory: An overview

This section aims to provide an overview of the theoretical framework which underpins this research. First, it will introduce the core concept of SCT—mediation, and the mediated nature of human activities, follows the roles of interaction and language in SCT which hold pivotal stances in a variety of learning activities. The last part reviews the dialectical relations between SCT, interaction and L2 development.

Vygotsky has been a prominent figure in the field of developmental psychology and education

in the past few decades. SCT originates from the study of child psychology, in which Vygotsky proposes that learning must be the result of interaction between children and the socio-cultural environment (Vygotsky, 1978, 1986). It rejects the Cartesian dichotomy of internal and external (Lantolf and Thorne, 2006) and considers the individual development as ‘transformation of socially shared activities into internalised process’ (John-Steiner and Mahn, 1996:192). It offers a theoretical and methodological framework through which the cognition and social context are systematically combined and investigated. Sociocultural research usually focuses on analysing the complex individual and social elements which interact with each other in the particular context that contributes to human psychological development (Kozulin, 1999). In the field of second language teaching and learning, centred upon the concept of mediation, SCT has been theoretically and methodologically underpinning a number of studies that are interested in the relationships between the assistance provided and learners’ L2 development (e.g., Donato, 1994; Ohta, 1995; Negueruela, 2003; van Compernelle, 2011; Smotrova and Lantolf, 2013; Hudson, 2011; Lugendo, 2014).

2.2.1 Mediated nature of human activities

Mediation is the core concept in SCT (Lantolf, 2000b). From a neuropsychological view, it is seen as the construction of the ‘connections in the brain from the outside’ (Vygotsky, 1997:55). Vygotsky introduces the term to describe the social impact on individuals’ learning and development. He argues that all human higher level functioning are ‘mediated’, either physically or symbolically through culturally constructed artefacts (Lantolf and Appel, 1994; Vygotsky 1999; Lantolf and Thorne, 2006; Wertsch, 2007). As the central tenet, mediation unites all constructs in SCT (Lantolf, 2000a:1). The use of tools and artefacts is in the centrality of the concept of mediation. Culturally constructed physical and symbolic artefacts are used by humans to mediate the relationships between themselves and the environment (Vygotsky, 1981; Cole and Engestrom, 1993). Those culturally constructed symbolic tools, such as language, numeracy, writing systems and concepts, to name a few, compared to physical tools which change the material world, mediate humans in a more abstract fashion (Kozulin, 2003:18). Those tools, as mediational means, as Figure 2.1 shows, connect the individual and the environment, not only facilitate but moreover, transform human thinking.

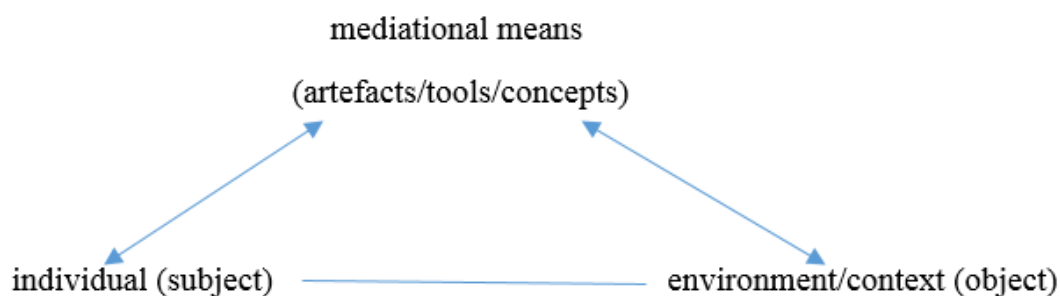


Figure 2.1 the mediated human activity in SCT
(adapted from Lantolf and Thorne (2006:62))

Individual learners' thorough control of the learning objects is derived from the appropriation of the repeated use of mediational means, this thorough control then leads to future development (Scollon, 2001; Lantolf and Thorne, 2006). Wertsch (1998) and Tomasello (1999) both point out that individuals do not merely select available cultural artefacts such as linguistic forms and meanings to mediate their learning behaviours, they also tend to adapt the means and the use of means to cope with their dynamic learning needs. In the educational context, mediation helps both teachers and learners to use tools, signs and technology systematically to improve human psychological processing and functioning (Haas, 1996; Levy and Stockwell, 2006).

With the research question focuses on how the learning is mediated, the provision of the mediation by the teacher and the appropriation of the mediation by the learner stay in the centrality of this study. The sociocultural perspective, with the key tenet of mediation, provides a useful way to address the mediational means and resources available in the classroom, and how these means and resources are provided and appropriated as symbolic tools to mediate the language learning activities.

2.2.2 The role of interaction in SCT-informed L2 learning

Language learning used to be considered as simply receiving input from teachers and learning grammar and vocabulary. In the field of SLA, from the 1970s, the role of interaction in language learning starts receiving attention. Hatch (1978) proposes that interaction in the

second language classroom is essential since the aim of second language learning is beyond receiving input and gaining metalinguistic knowledge of the target language, it is rather learning how to communicate. Krashen's (1982, 1985) concept of '*i+1*' and input hypothesis suggest that input in the L2 classroom needs to be slightly higher than learners' current L2 level, meanwhile still be comprehensible. It is under such circumstances that second language teaching could help learners reach a higher developmental level. Long (1981) extends Hatch's research by investigating the interactions between native and non-native speakers. He claims that linguistic modifications in the L2 classroom such as simplified grammar, slower teacher talk and clarification requests do benefit learners, therefore they could be helpful for L2 development. Swain (1985) then proposes that relying only on interaction is not sufficient for L2 learning and development thus learners need to produce 'pushed output', which means learners need to produce the language beyond the current L2 level to gain development. This stream in SLA then has been developed into *the interaction hypothesis* or *the interactionist approach* (Gass and Mackey, 2006; van Compernelle, 2015). In a word, *the interaction hypothesis* (Long, 1983, 1996; Ellis, 1994) considers interaction as a beneficial component of language teaching and learning.

In the last two decades, the interactionist perspective of SLA emerges to perceive interaction in second language learning to be the basic site of the organisation of sociocultural activities (see Mondada and Pekarek Doehler, 2004; Hall et al., 2011; Hellermann, 2007; Kasper and Wagner, 2011; van Compernelle, 2011). Researchers who hold this perspective argue that the interaction is actually the venue in which the second language learning and development is co-constructed. And in this venue, the learning and development of a second language lead to a developed interactional competence (van Compernelle, 2015). Mondada and Pekarek Doehler (2004) criticise *the interaction hypothesis* for ignoring the importance of context, and wrongly considering the role of context and interaction in language learning only as 'auxiliary' (p.502). The notion of interactional competence (hereafter IC) (see Hall and Pekarek Doehler, 2011; Kramsch, 1986; Young, 2000, 2011, 2013) has been developed to describe and explain the variation in an individual's interaction from one discursive practice to another (Young, 2000, 2013; Young and Miller, 2004). IC is not confined to language skills

or concrete L2 knowledge, it is ‘the ability to mutually coordinate our actions’ (Hall and Pekarek Doehler, 2011: 2). Thus IC is co-constructed and made relevant as interaction proceeds (Young, 2011). L2 IC has been the focus for a number of studies that investigate the L2 classroom teaching and learning (Cekaite, 2007; Ishida, 2009; van Compernelle, 2011; Watanabe, 2017; Pekarek Doehler, 2018). Pertain to language classrooms, Walsh (2006, 2011, 2013) develops classroom interactional competence (CIC), which is defined as ‘teachers’ and learners’ ability to use interaction as a tool for mediating and assisting learning’ (Walsh, 2011: 158).

Vygotsky (1978, 1986, 1999) argues that all human higher functioning originate from the relations between individuals and the environment. He makes the conclusion that development takes place at two different planes: the first is interpsychological at the social level, between the learning context, significant others and the learner; the second is at the individual level, which takes place intrapsychologically inside the learner. These two developmental levels ‘apply equally to voluntary attention, to logical memory, and to the formation of concepts’ (Vygotsky, 1978:57). From the SCT view, learning is a mediated social practice which relies on interaction to develop the use and control of psychological tools (Mitchell and Myles, 2004). The action of interacting with other human beings in social activities dialectically combines external-social and internal-psychological process at one time. Interaction is both the means for and the result of personal development (Frawley, 1997; John-Steiner, 2007). At the social level, mediation provided in interaction is the key to the appropriation of psychological tools (Kozulin, 2003; Wertsch, 2007). Participants of a particular learning activity, for example, parents, teachers and peers, provide help through interaction. It is through the interaction, in which learners are encouraged and supported to perform beyond their actual competence, that the new level of performance and competence develops (Cazden, 1981; Lantolf and Thorne, 2006; van Compernelle, 2015; Lantolf, 2011).

For L2 learning and development in particular, SCT also centres the role of interaction as the joint activity in learning. It sees interaction as the source and driver of L2 development rather than merely as the external context (Lantolf and Thorne, 2006; van Compernelle, 2015).

Interaction in the L2 classroom mediates the joint actions of participants in classroom activities. The human mediation (e.g., the assistance and support from teachers or more capable peers) embedded in interaction supports learners to perform beyond their current language abilities. In addition, SCT's research interests in L2 classrooms go beyond the support and assistance themselves, SCT puts effort on how learners internalise these support and assistance in co-constructed learning activities (see Rogoff, 1995; Chin et al., 2004; van Compernelle and Henery, 2014; Toohey, 1998).

2.2.3 Language as mediational means and resources

As previously stated, from Vygotskian views, culturally constructed artefacts are the primary means by which humans organise and control higher mental functioning, in which interaction and the use of language play a central role. Through mediation in interaction, humans deploy culturally organised artefacts, concepts and activities to regulate and gain control of mental activities. In regard to symbolic artefacts, language and linguistic activity, such as speaking and writing, is the primary though not exclusive (Lantolf and Thorne, 2006) means for thinking. Language, among other culturally constructed tools, with the feature of 'reversibility' (ibid: 60), serves the most important mediational function in both ontogenesis and microgenesis (see Section 2.2.4) of individuals (Vygotsky, 1978, 1986). The linguistic resources could be employed to represent different meanings to different individuals, the meanings constructed during the use of language conceptualise the material world and the activities (Smagorinsky, 2001). Similar to physical tools which change the material world, language impacts and organises information and knowledge in both the material world and mental functioning (Bruner, 1966; Scollon, 2001) as it helps individuals to collaborate with others to shape activities and goals (Lantolf and Appel, 1994).

Vygotsky and his followers have conducted many seminal and influential SCT research on the development of children, one of them is Luria's (1981) empirical research on children's development. It documents the process of the emergence of children's voluntary control over activities which also showcase language's important mediational functions. His research demonstrates that first, the control is at the interpersonal plane, begin with the speech given

by others, such as parents and siblings; then the children learn how to use speech to regulate their own activities. During this process from other-regulation to self-regulation, language is initially in the external form then gradually being transformed and internalised to mediate children's behaviours. The linguistic activities are not thinking itself but serve a planning function to regulate the thinking process, which is essential for successful self-regulation.

Notably, in the context of second language classroom, the L2 has a dialectical function. It is the means and tool through which learners obtain and internalise the subject knowledge. Meanwhile, it is also the learning object, a set of psychological tools which needs to be internalised for development (Bodker, 1997; John-Steiner, 2007; van Compernelle, 2015). According to Lantolf and Thorne (2006), L2 acquisition is more than acquiring a new set of grammar rules and vocabulary, it is more about the acquisition of a new 'conceptual knowledge or/and existing knowledge' to mediate and re-mediate mental activities, to communicate with the outside world. Learning an L2 expands learners' repertoires in their participation in social activities. Meanwhile, the L2 interaction which serves the function as mediation, is the key to interpsychological L2 knowledge development. Language teachers and more capable peers as providers of human mediation are more than merely knowledge or input providers in the classroom context.

For the present study, the language's pivotal role in mediation sheds light on the forming of the research question, which focuses on how the mediation is processed and appropriated in the classroom interaction. Language is an indispensable resource for classroom interaction and mediation. Mediation, such as assistance and help from the more knowledgeable others (Swain and Lapkin, 2002; Baleghizadeh, Memar and Memar, 2011) must be carried out through the medium of language. To answer the research question, before start analysing the classroom interaction data, it is important to address here first the role of language within the SCT framework, and then how language is oriented by the teachers and the learner in this particular CFL context can be investigated.

2.2.4 Sociocultural theory, interaction and L2 development

As iterated in previous sections, sociocultural theory suggests that the interaction with others in which the mediation and internalisation are embedded, is the driver and origin of personal psychological development. Thus SCT against Piagetian theories and behaviourist notions that depict development as biological maturation, it also against the idea that learning and development are separate from each other (Lantolf and Thorne, 2006). As a learning and development theory, it focuses particularly on inter-and intra-psychological development of learners, underscores the essential role of language and interaction as mediational means and resources for learning and development. SCT tries to explain how learning happens as psychological changes of human higher functioning in social interactions. In the classroom context, SCT sees learning as a two-way process involves teacher instruction and learner internalisation, a process that combines the quantitative accumulation of knowledge as well as the qualitative change of learners' understanding (Cole, 2009).

To be specific, in the L2 classroom context, SCT conceptualises L2 development as learners gradually gain control of new linguistic and semiotic resources through the internalisation of mediation available in the context to regulate their future L2 use. Interacting with others in context leads to learning, and learning provokes potential development. L2 development in Vygotskian sense, depends on the quality of mediation and internalisation, entails qualitative emergence of new forms of knowledge, or the re-organisation of the mental process and activities (Wertsch, 1985, 2007; van Compernelle, 2015). It goes beyond the accumulation of linguistic and metalinguistic knowledge to encompass the qualitative changes of the internalised L2 knowledge and concepts which mediate further L2 use and thinking processes. These qualitative changes ultimately lead to conscious control of L2 use and interaction in future.

Memorising linguistic knowledge does not necessarily guarantee mastery of L2 consciously. In order to use linguistic knowledge consciously in actual L2 interaction, L2 learners need to develop complementary competence through enough practices (Ellis, 2005, 2008; Paradis, 2009). One of the primary developmental consequences of L2 interaction is forging the link

between conscious knowledge of language and actual performance abilities (van Compernelle, 2015), this is also one of the ultimate goals of L2 classroom interaction. In order to fulfil this goal, L2 learners in interaction rely on assistance provided by their teachers or more capable peers, through classroom interactional moves such as prompts, recasts, hints and clarification. These assistance and help distribute the cognitive function of applying conscious knowledge of language during the classroom performance to create the Zone of Proximal Development (ZPD) then contribute to the development of new competencies and abilities (ibid).

Aljaafreh and Lantolf (1994) investigate the effect of teachers' negative feedback in promoting learning in writing tutorials. They conclude and argue that the assistance and help during instruction need to be gradual and contingent according to learners' shifting needs. It is worth noticing, in SCT, L2 development entails expansion of the individual's resources for meaning-making in all the languages known by the individual. The development of L2 vocabulary, structures, patterns and meanings appropriated along with learners' L1, expands individuals' interactional resources and repertoire in general social activities (Lantolf and Thorne, 2006). In a word, the L2 development contributes to an individual's expansion of holistic linguistic repertoires, hence L2 learners are emerging multilinguals (Ortega, 2010; Levine, 2011). Through the process of L2 development, they become able to mediate a variety of social interaction with new concepts beyond the L2 classroom.

Vygotsky (1981) proposes four genetic domains in his study of human higher mental functioning development: phylogenetic (biological), sociocultural history, ontogenetic and microgenetic (Lantolf, 2000a). Sociocultural research about human development has largely focused on ontogenetic domains, which put the interest on how children appropriate and integrate mediational means, primarily in the form of language as they become adults in social communities (see Vygotsky, 1987b; Luria, 1981). For another important developmental domain, microgenesis, Vygotsky has defined it as the development observed during a very short time, even in seconds or fractions of a second (Vygotsky, 1978; Lantolf and Thorne, 2006; Swain and Ping, 2007; Ganem Gutierrez, 2008; van Compernelle, 2015). As a crucial

construct in current SCT studies, microgenetic studies (e.g., Luria, 1973; McNeill, 1992; Knouzi and Swain, 2010; van Compernelle, 2010, 2011) focus on the appropriation and development in a short time span. In regard to second language learning, microgenetic studies are interested in the learning of a particular word, pronunciation or grammatical structure of the L2 (Lantolf, 2000a).

Considering the time limit for a PhD study, it is unrealistic from many aspects to conduct an ontogenetic study about learners' longitudinal development of the L2. Therefore, I choose to focus on one learner's appropriation of the mediation as the research object at a micro level. Through the SCT lens, this research is to investigate how this particular English learner of L2 Mandarin Chinese, interprets, re-organises, recycles and internalises the mediation made available by the teachers and the classroom context in dynamic interaction. Moreover, this research is to discover how these activities contribute to the qualitative changes of his L2 knowledge and competence during four weeks' instruction across two months' time span.

2.3 Constructs of sociocultural theory and L2 development

In this section, the constructs of SCT which are salient to this study and the related research in the field will be intensively reviewed and explained. The constructs' meanings, definitions, values and their inspiration and relation to the formation of the current study will be revealed.

2.3.1 The Zone of Proximal Development

One of the robust domains for sociocultural SLA research is the Zone of Proximal Development (hereafter ZPD). It closely relates to language learning, development and pedagogy, although Vygotsky himself only discusses the idea a handful of times (Chaiklin, 2003). The concept originates from the genetic, historical law of development (Vygotsky, 1978, 1986). Vygotsky defines the ZPD as:

‘the distance between the actual developmental level of the child as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers’

(Vygotsky, 1978:86)

The definition of the ZPD indicates that individual learners work with more knowledgeable others in collaborative activities to internalise the knowledge, symbolic artefacts, and tools, thus they transcend their original abilities of problem-solving to reach a higher level development. In Vygotsky's work, the concept of ZPD then expands to explain issues in education and cognitive development (van der Veer and Valsiner, 1991; Lantolf and Thorne, 2006). It is not a physical place but a metaphor constructed to observe and understand the mediation and how mediation is internalised (Lantolf, 2000a).

Unfortunately, Vygotsky does not propose a specific and detailed procedure for identifying learners' ZPD, nor does he make clear how to perform the 'guidance and collaboration'. Researchers have also pointed out that the original idea of the concept of ZPD in Vygotsky's own work seems varied and contradictory (Chaiklin, 2003). There exist differences between Vygotsky's original description and the subsequent interpretations by other researchers (Lantolf and Thorne, 2006). This phenomenon demonstrates that the idea of ZPD is more like a nascent idea than a fully developed theoretical framework (Lantolf and Thorne, 2006; van Compernelle, 2015).

Mitchell and Myles (2004: 196) interpret the concept of ZPD as 'the domain of language or skills where the learner is not yet capable of independent functioning, but can achieve the desired outcome give relevant scaffolded help'. From this conceptualisation of definitions, it is suggested that the ZPD is seen as 'distance' or a 'place' where learning takes place. Swain et al. (2011) propose a different interpretation by considering the ZPD as 'activity' in the classroom through which learning takes place. van Compernelle (2015) suggests that the concept of ZPD be concluded into two types: measurable ZPD and actionable ZPD. In his opinion, the former means uncovering and diagnosing higher functions which have already begun to emerge but are not yet under psychological control; meanwhile the latter emphasises the potential development under the external assistance of interpsychological interactional activities. His expanded conceptualisation about the ZPD has implication for pedagogy, as it provides teachers with a tool to foreground learners' abilities in tests and assessment, and sheds light on how assistance and help could be applied to promote learning towards certain

goals.

According to Chaiklin (2003), a learner's ZPD is not static, rather it changes according to the varying tasks, hence the appropriateness of the task should be taken into consideration while assistance is provided within the ZPD. As the ZPD defined as the difference between learners' actual developmental level and potential developmental level, the ZPD already encompass skills and abilities appropriated. Thus van Lier (1996) concludes that when learners use their appropriated skills and knowledge, combine with the assistance and support provided by teachers or peers through interaction, that the collaborative work within the ZPD is accomplished.

The effective instruction within the ZPD should not be simplified as any assistance conducted between the expert and the novice. On the contrary, the assistance and support must be carefully orchestrated to focus on abilities which have the potential to be transformed into the next developmental level (van Lier, 1996; Dunn and Lantolf, 1998). In order to support these potentialities of development, language teachers need to be sensitive to both current and potential abilities of learners (Lantolf, 2000a). Ohta (2000) investigates developmentally appropriate assistance within the ZPD which contributes to the learning of grammar of two L2 Japanese learners. She analyses the help provided during learning activities, and concludes that teamwork and mutual sensitivity between two learners are essential in the assisted performance. As one learner gains independence on the language, the more capable one becomes less responsive and withdraws the support. Ohta's (2001) another study, argues that the collaborative work within the ZPD requires clear goals, challenging activities and suitable strategies to engage learners in the meaningful interaction which pushes them to a higher level of development.

The present study, theoretically, follows Vygotsky (1978) and Mitchell and Myles's (2004) traditional definitions, considers the ZPD as the difference between the actual independent performance and the potential development level with assistance. In the analytic practice, collaborates with Swain et al. (2011), the ZPD is conceptualised as the classroom activities

through which learners develop their L2 competence with the assistance from other participants of the classroom interaction. In Chapter 4 and 5, the assistance and learner's active role towards the assistance will be analysed in detail to demonstrate how the assistance and mediation are provided through the dynamic use of language and other resources, and how the focal learner makes use of these resources to facilitate L2 micro-development.

2.3.2 Scaffolding—a framework to describe mediation

The notion 'scaffolding' is presented as a metaphor in Wood et al.'s (1976) seminal work, which analyses the effective assistance provided in mother-child interaction. In that paper, the scaffolding process enables the children to solve the problem, carry out the task and achieve a goal when the task is challenging in nature, and the children are unable to complete without the assistance from the adult. Wood and his colleague (Wood and Middleton, 1975; Wood, Bruner and Ross, 1976) also point out that the metaphor of scaffolding involves adult control of the task elements which are beyond the children's independent ability. This control allows the children to concentrate on the task elements within their own capacity, thus ensures the successful completion of the task and goal. Scaffolding is a process that " 'setting up' the situation to make the child's entry easy and successful, then gradually pulling back and handing the role to the child as he becomes skilled enough to manage it" (Bruner, 1983:60). The notion of scaffolding, according to Foley (1994) and Boblett (2012), originates from Vygotsky's study on language learning and closely links to the concept of ZPD. It demonstrates the dynamism of the process within the ZPD (van Lier, 1996:195).

According to Wood et al.'s (1976:98) definition, scaffolding is characterised with the following features:

1. Recruitment of interest to the task
2. Simplifying the task and reducing the degree of freedom
3. Maintaining pursuit of the goal
4. Marking critical features and/or discrepancies between the correct production and what has been produced by the learner
5. Frustration control

6. Demonstrating and modelling the ideal solution

Since the emergence of the notion, during the past four decades, scaffolding has been a useful tool in discussions from parent-child activities to a variety of contexts in education; from one-to-one tutoring sessions (Cazden, 1988) to whole class instruction (Thompson, 2009). As previously mentioned, language and interaction have a central role in classroom instruction and learners' L2 development (Lantolf and Thorne, 2006; McNeil, 2012). During the instructional dialogues between participants in the classroom, the L2 knowledge and competence are socially mediated and co-constructed through the practice of scaffolding (Donato, 2000; Lugendo, 2014). Applebee and Langer (1983, 1986) propose *instructional scaffolding* for the teaching of reading and writing. In their studies, build on Wood et al.'s (1976) six features of scaffolding, they develop an instructional model that contains five scaffolding mechanisms: *ownership, appropriateness, structure, collaboration and internalisation*. The model especially emphasises the role of learners during the process of scaffolding.

Within the sociocultural framework, a number of studies have investigated the scaffolding practices among learners. For example, Donato (1994) introduces collective scaffolding, reveals how learners help each other through collaboration. Antón and DiCamilla (1998) show how learners with the help of L1, assist each other collaboratively. By utilising Lidz's (1991) categories of instructional moves, de Guerrero and Villamil (2000) analyse the peer responses within learners' ZPDs in L2 writing tasks.

Compared to the studies regarding the scaffolding distributed between learners, fewer studies have been found to focus on scaffolding functions of teacher talk (McNeil, 2012). Adair-Hauck and Donato (1994) investigate the teacher-learner interaction in grammar classes, uncover how the teacher and learner establish similar orientation towards the grammar task. In their research, the teacher employs elaborations and comments, along with gestures to assist the learner's understanding of the task. Antón's (1999) research situates in a learner-centred classroom, investigates its teacher-learner interaction. By analysing how teacher talk, both verbally and non-verbally, supports learners' oral production. This research discovers

that scaffolding functions are fulfilled by interactional moves, such as using directives, questions and non-verbal resources in teacher-learner negotiation in L2 problem-solving activities. Antón compares the discourse patterns of two teachers who follow different pedagogical approaches. The analysis shows that learning opportunities and scaffolding provided through the non-dialogical teaching approach are reduced compared to the dialogic teaching approach. Michell and Sharpe (2005) conceptualise scaffolding as language mediated co-regulation activity. They analyse and compare the whole-class teacher-learner interaction in math and English classrooms respectively. The study proposes a model of instructional collective scaffolding, which encompasses the conditions of scaffolding (task responsibility, challenging problem-solving activity, knowledge/skill differences among learners, concern of the expert) and the classification framework of scaffolding (inscriptional, interactional, indexical).

Following Antón's (1999) model, McNeil (2012) explores how talk scaffolds young EFL learners' understanding and responses to referential questions. His finding expands the interactional moves mentioned above to include the using of physical objects, wait time and calling upon other learners to assist learners' L2 performance within the ZPD. Lugendo's (2014) research also adopts a sociocultural perspective, unveils the whole-class scaffolding strategies the pre-service teachers of English employ in Kenyan secondary school context. The study is contextualised in a non-western classroom context, which is largely different from the existing research, treats scaffolding as a social process. This research identifies dialogic strategies used by student-teachers, to name a few, assisting questions, wait time, repetition, clarification, recast, modelling, comprehension checks and calling on other learners (p.81). The collection of dialogical strategies expands the understanding of the scaffolding strategies summarised by previously reviewed studies. She also categorises these scaffolding strategies into five mechanisms: collaboration, modelling, questioning, feedback and instructing (p.82).

From the studies previously reviewed, we have a glimpse of teachers' language use in scaffolding practice and how scaffolding supports the completion of L2 tasks. Although for

decades, the efficacy of scaffolding practice in different learning contexts has been established, it also receives some criticism. Researchers have argued that the notion of scaffolding simplifies the understanding of the ZPD. While the ZPD observes the relationship between teachers and students to be bilateral, yet scaffolding focuses more on the support and assistance by the ‘knowledgeable other’ (e.g., teachers, parents) (Newman, Griffin and Cole, 1989; Lave and Wenger, 1991; Stone, 1998; Daniels, 2001; Verenikina, 2008). Within the sociocultural field, other researchers have also questioned the relation of scaffolding and the promotion of development (see Valsiner and van der Veer, 1993; Poehner and Lantolf, 2005).

Valsiner and van der Veer (1993) argue that scaffolding implies a unilateral and pre-planned assistance structure in class. It fails to notice and focus on learners’ abilities which are still in the process of maturing, as scaffolding requires the teacher to ‘compensate’ for the lack of ability. Verenikina (2008) also warns that the narrowing conceptualisation of scaffolding might render the classroom interaction to be adult-driven (Stone, 1998) and treats learners as passive recipients to teachers’ instruction. According to the definition and features of scaffolding proposed by Wood et al. (1976), while teachers’ focus has largely been put on learners’ incapability and the needs to scaffold it during the completion of a task, scaffolding assists the completion of the particular task, but there lacks evidence to conclude that scaffolding assistance promotes development (Alsowayegh, 2015).

Through Wood et al.’s (1976) influential definition and the description of scaffolding features, to a great number of research focus on scaffolding practices in L2 language classrooms (see Adair-Hauck and Donato, 1994; Donato, 1994; Antón and DiCamilla, 1999; Antón, 1999; Lugendo, 2014), it is observed that the practice orients to the completion of a particular task. It is worth to mention that the language classroom entails different classroom activities, learning through language and interaction tasks is only part of the dynamism. The data collected in a CFL classroom for this study also demonstrates that there exist various instances of contingent and fluid learning activities, in which the provision of assistance does not aim to complete certain tasks. Therefore, in Chapter 4, the language and interaction tasks are chosen as the premise for the analysis of scaffolding and the resources within the practice.

For other mediational practices which are not in the form of a task but happen spontaneously and contingently, they are discussed with the perceptions of regulation (see Section 2.3.3) and affordances (see Section 2.4).

2.3.3 Regulation and co-regulation

Another useful construct of SCT for L2 research is regulation. According to Luria and Yudovich (1972), the early development of children's thinking and action is subjected to adults' words. It is the speech of adults that brings children's thinking and activities to a new and qualitatively higher level (p.24). Through this process, children acquire the linguistic means used by the community in interaction and eventually use these linguistic means to regulate their own behaviours (Lantolf and Thorne, 2007). To develop the ability to autonomously regulate one's own behaviours, children, or in a broader sense, learners move through three stages: object-regulation, other-regulation, and eventually self-regulation.

At the stage of object-regulation, children rely on objects in the context to think. In the second stage, other-regulation, implicit or explicit mediation from the 'knowledgeable others' (Swain and Lapkin, 2002) involves in the development, provides various assistance, direction and scaffolding (Lantolf and Thorne, 2006). The final stage is self-regulation, in which the learner is able to conduct and accomplish the activity with minimal or no support (Lantolf and Thorne, 2007), the state of self-regulation is fulfilled through internalisation, another important construct in SCT (see Section 2.3.4). Frawley (1997) argues that self-regulation is not stable, when under challenging circumstances, even an adult may reverse to be regulated by objects. According to the challenges and demands of the activity, an individual learner might go through these stages 'at will' (p.98). At the last stage, self-regulated learners proactively orient their behaviours to plan, monitor, adapt and progress to achieve goals (Heritage, 2018).

The idea of co-regulation is derived from SCT conceptualisation that learning is a socially mediated activity (Vygotsky, 1962) in which knowledge is shared and co-constructed (Wertsch, 1991; Mercer, 2011). In the language classroom, during co-regulation, the

responsibility of knowledge construction is distributed between the teacher and the learner. The learner in co-regulation needs to be actively engaged with the teacher's support, appropriates and internalises the knowledge. Heritage (2018) argues that it is through the co-regulation process that learners gradually and progressively transfer to the autonomous state of self-regulation. Bailey and Heritage (2018) consider that co-regulation may be either facilitative or counter-productive towards the learner's self-regulation.

Regulation and co-regulation have a link with *negotiation for meaning* (Long, 1996; Savignon, 1997; Gass and Mackey, 2006), which has a powerful influence and impact in mainstream SLA research. Long (1996) defines negotiation for meaning as a process in which interlocutors provide and interpret interactional signals, adjust their speech content, linguistic forms and conversation structures to reach a mutual understanding, thus the interaction could proceed. It is an interactional mechanism to maintain intersubjectivity for achieving mutual understanding of interactional intentions. SCT sees the process of negotiation for meaning beyond the construction of mutual understanding, as it emphasises that all participants of interaction to understand the relevance and the appropriateness of the linguistic and symbolic tools for social actions (van Compernelle, 2015).

According to Vygotsky's genetic law of development (1978), other-regulation, which involves the assistance, help and support from others, entails the mediation at the interpersonal level. SCT's socio-constructivist view towards learning considers that learning and development are dialogic and a social product of the negotiation mediated by language (cf. Bruner, 1988; Wells, 1999; Wertsch, 1991). SCT approaches *negotiation for meaning* through the analysis of co-regulation (Lantolf and Thorne, 2006; Swain et al., 2011; van Compernelle, 2015).

Learners are not passive recipients but actively engage in the interactive mediation process (Lantolf and Pavlenko, 2001; Verenikina, 2008). Therefore, towards the assistance, which is provided by the most pervasive mediational resource—language, learners also understand, interpret and adjust their own interactional performance to understand and appropriate teacher assistance. Teachers' pedagogical behaviours mediate learners' activities, meanwhile, in turn, learners' performance also dialogically regulate (e.g., change, control) teachers' subsequent

behaviours. Learners' responses, for example, problematic linguistic products, hesitation, slow tempo, changing intonation and prosody indicate that learners are experiencing difficulties, require teachers to adjust ways and forms of mediation. Accordingly, the teacher could make adjustments to previous linguistic structures, prosody, gestures as well as other non-linguistic resources to draw learners' attention to the trouble sources, ill-formed structures and inappropriate use of L2. Teachers and learners regulate each other, jointly contribute to the co-production of the classroom activities (Poehner, 2008; van Compernelle, 2010a, 2014b; Lantolf and Poehner, 2011; Poehner and van Compernelle, 2013).

Few studies have particularly and intentionally addressed the concepts of regulation and co-regulation. The findings from the existing studies of scaffolding and classroom interaction reviewed in the previous section still manage to unveil the significance of regulation and co-regulation in the classroom context. Antón's (1999) research, which is reviewed in the previous section, focuses on the scaffolding of learner-centred classroom discourse, analyses how learning opportunities are created through teacher-learner engagement. Antón considers the learner-centred classroom discourse is effective as the negotiation process between the teachers and learners are carried out within the learners' ZPDs. The teacher-learner engagement depicts the co-regulated nature of their interaction. Aljaafreh and Lantolf's influential work (1994) adopts a Vygotskian view, examines the corrective feedback in one-on-one L2 writing sessions, focuses on the contingent and negotiated nature of the feedback provided by the teacher. They argue that the feedback can be effective only when both the teacher and L2 learner are psychologically involved in the teaching activity. This finding collaborates with the co-regulation perception that the feedback is contingent and negotiated. Heritage (2018) explicitly addresses co-regulation in the analysis of Assessment for Learning (AfL) in the classroom. The study demonstrates that the learners' self-regulation is supported through the temporary process of co-regulation between teachers and learners. The study also conceptualises the features of co-regulation to be 1) goal-oriented, 2) scaffolding, 3) intersubjectivity, 4) active construction of knowledge by learners, 5) temporary support. Although the findings are preliminary, the author argues that co-regulation is fulfilled through joint regulatory behaviours in the classroom. Furthermore, co-regulation is a major

component in learners' development of self-regulated learning.

In the present research, co-regulation is considered to be a dialectical process co-constructed by both the teacher and learner. On the one hand, close attention will be paid to the co-regulation, in which the teaching and learning are jointly constructed, to discover how the particular learner's independent performance signals the ZPD for the teachers. The teachers' various mediation activities which are triggered by the learner's independent performance within the ZPD will be observed and analysed to answer the research question that how the mediation is processed to help the learner to gain ownership and independence over tasks as well as the L2 knowledge. On the other hand, the analysis also concerns when the mediation seems to mismatch with the learner's need, how the learner approaches various available resources to negotiate with the teachers.

2.3.4 Internalisation—the link between social and psychological planes

In the previous sections, follows the overview of SCT and its core concept mediation, the SCT constructs of the ZPD and scaffolding mechanism which conceptualise mediation and regulation have been introduced. This section then discusses another central theoretical construct of SCT—internalisation, which reveals learners' role in mediation and development, connects the material world and human psychological activities. First, the theoretical understanding of the concept will be addressed, then the researcher will discuss its relevance to L2 development.

The term internalisation is used to describe the process by which human beings deploy material and cultural tools to help psychological functioning. It bridges mediational means and intrapsychological functioning in individual learners' mind (Lantolf, 2003; Lantolf and Thorne, 2006). It is the process, in which knowledge becomes one's own. Vygotsky defines it as the mechanism established to control human natural endowments, he also realises that the internalisation process is not a one-way street, internalisation along with externalisation together form an inseparable unity (Zinchenko, 2002). Vygotsky proposes this notion to overcome the Cartesian mind-body dualism (Lantolf and Thorne, 2006). It is a one-system

(ibid) solution to combine the external objective world and internal subjective world, to recognise that the key to overcoming mind-body dualism is the semiotic mediation (Veresov, 1999).

As learners internalise the mediational means to support their own psychological functioning, the relationships between human mind and external environment are re-organised through social human mediation (Winegar, 1997). It is mentioned in the previous sections that mediational means are appropriated by learners in the co-constructed and negotiated interaction. Hence, internalisation is also a negotiated developmental process which is distributed between participants of learning activities (ibid). Kozulin (1990:116) states that ‘the essential element in the formation of higher mental functions is the process of internalisation’. How individual learners appropriate mediational means in social interaction to be one’s own is set as the key during internalisation. It is worth noticing that Vygotsky emphasises that internalisation is not a transmission process (Lantolf, 2000a) which simply duplicates the external environment in the internal plane but rather a transformative process. This transformative process is reciprocal as well as bidirectional (Frawley, 1997; Zinchenko, 2002; Lantolf and Thorne, 2006). Individuals transform what has been mediated, re-organise (Wertsch, 1985) it at the internal plane before they could externalise the knowledge to impact their own behaviours along with the social environment. Zinchenko (2002) furthermore elaborates that the process of internalisation does not only facilitate and transform psychological functioning, it is also transformed by psychological functioning.

Specifically, in the field of SLA, Carroll (2001) argues that the process of acquisition of an L2 is not directly visible to SLA researchers, it could only be inferred from some activities of learners, such as interpretations and utterances learners produce, time learners spend on processing the language as well as judgements they make about acceptability of the language. The observation and analysis of the internalisation process from the SCT perspective could make the acquisition process visible. Internalisation, links to self-regulation, determines that language learners internalise the target language in interaction rather than operating and processing modified linguistic input internally and visibly (Lightbown and Spada, 1999).

Internalisation is far beyond the mastery of vocabulary, grammatical rules and structures. Instead, it focuses on gaining the ownership of linguistic knowledge and manipulating the linguistic and interactional resources to create one's own repertoire (Dunn and Lantolf, 1998; Wertsch, 1998; van Compernelle, 2015). Mediational means and resources are made available during social interaction, upon which the internalisation takes place. However, it is worth noticing that social interaction, as the co-constructed activity which involves the help and guidance of others, is not the only place internalisation could happen. Private speech, the language used inwardly by individuals could also contribute to the internalisation process (Lantolf and Thorne, 2006; Swain, 2006), will be discussed in the later section (see Section 2.3.6).

In the current research, with the research aim to explore how learning is mediated in the L2 classroom, one of the analytical focus is to uncover how the mediational resources are processed and appropriated in this particular CFL context to influence one particular learner's L2 micro-development during two months' time. The identification of the L2 micro-development in short time span is guided by the construct of internalisation. For L2 micro-development to happen, the learner must go through a process from being incapable to capable, in which he internalises the mediation supplied and afforded by the context to regulate his linguistic and social behaviours. When this process is observed, the analysis focuses on uncovering how internalisation is supported through the provision of mediation. This process will be presented in Chapter 5 through the instances of micro-development.

2.3.5 Imitation as a mechanism for internalisation

Imitation in SCT is considered as a pivotal mechanism for internalisation (Lantolf and Thorne, 2006). Lightbown and Spada (1993) narrowly define imitation as rigid word-for-word repetition of all or part of someone else's utterance. Their study claims that imitation is selective and based on current learning objects, denies the significant contribution of imitation to language development. From an SCT perspective, this view neglects the transformative quality of imitation which is seen as a critical and revolutionary activity of development

(Newman and Holzman, 1993).

Imitation proposed by Vygotsky differs from the narrow notion of mimicry and copying (Vygotsky, 1978, 1986). He points out that it is through imitation, that the socioculturally constructed mediation are internalised to be learners' own (Vygotsky, 1987; Lantolf and Thorne, 2006). Sociocultural imitation is beyond the mechanical copying and repetition of others' utterances, but requires learners first to have certain understanding of the task at hand (Vygotsky, 1978; Tomasello, 1999, 2003; Chaiklin, 2003). Lantolf (2006) argues that imitation is one of the primary pathways and developmental processes toward internalisation and maturing of knowledge, concepts and patterns of L2 meanings and use (see also Tomasello, 2003). In addition to the understanding of the task, learners also need to realise the relevance of mediational means to the task in the context.

Ohta's (2001a) research on learners' frequent repetition in classroom reports that learners' self-directed speech is not merely repetition but also their own creation with the language. Another study done by Ohta (2001b) has noticed that L2 learners may imitate teachers' and peers' utterances which they overheard privately and manipulated the relevant grammatical, lexical and pragmatic rules. Murphey (2001) coins the term '*conversational shadowing*' for the classroom behaviours that learners repeat in full or in part the utterances of others as they are being spoken. Similarly, van Compernelle (2015) reports that among advanced learners of French, delayed private imitation as a rehearsal for future interaction is fairly common, learners play, modify and master the language through imitation. L2 learners may delay the imitation utterance for the opportunities to analyse and appropriate the language learned offline, which echoes with children's developmental behaviours (Meltzoff and Gopnik, 1989; Meltzoff, 2002; Lantolf, 2006).

From these studies, we can see that the imitation proposed by SCT involves the processing, modification, reproduction and creativity of the L2 by learners, rather than rigid, precise copying. Lantolf and Thorne (2006) point out that in adult language classrooms, more precise copying of the linguistic structures are observed, which may attribute to the reason that

learners are inclined to ‘get the right answer’. But they also elucidate that even in this kind of learning context which values the right answer more, learners produce transformative imitation as well.

2.3.6 Private speech

In the previous sections, the mediated nature of human activity along with other pivotal constructs relevant to the current research have been reviewed. In Section 2.2, the crucial role of interaction as the site of the origin of internalisation and development along with the role of language as the mediational resources have been elucidated. A central claim of SCT is that social speech in interaction develops into the inner psychological tools as private speech for self-regulation (Lantolf and Thorne, 2006). Private speech is a vital construct of SCT with regard to the role of interaction in L2 acquisition (Fahim and Haghani, 2012). It is a pivotal mechanism by which learners gain ownership and control over mental functioning during challenging learning activities.

The term ‘private speech’ is not used by Vygotsky himself, but it is coined by Flavell (1966) (cited in Lantolf and Thorne, 2006:75). It is defined as the externalised inner speech employed by adults to self-regulate their behaviours in mental activities (ibid), it is the ‘externalised speech for oneself’ (de Guerrero, 2018). Frawley (1997) argues that private speech cognitively brings the resources and features which are relevant to the current problem-solving activity into learners’ focus, and L2 learners at intermediate level have relied heavily on L1 private speech as a regulation strategy. Frawley and Lantolf’s (1985) study investigates L2 English private speech in storytelling behaviours. The findings show that all private speech produced by learners of different proficiency levels are in the L2, but learners did not use the appropriate L2 semantically and pragmatically. The study argues that learners orient themselves to the cognitive activity at hand before they are able to conduct the task, the cognitive struggle is manifested in their L2 use. This study also reports that low- proficiency learners use more affective markers, such as ‘oh’, ‘ok’ which are frequently used as the indication of a change in belief (Frawley, 1997). This phenomenon is deemed as a significant indication of learners begins to appropriate new L2 meanings into their speech repertoire, not

only in the classroom but also in the new speech community (Lantolf and Thorne, 2006). McCafferty (1994) partially replicates Frawley and Lantolf's (1985) study, his finding agrees with that of Frawley and Lantolf. Learners with lower L2 proficiency produce more private speech, hence more advanced L2 learners are more able to self-regulate their linguistic behaviours thus produce less private speech.

In more recent time, in regard of adult L2 learners, a number of studies have been focused on how L2 learners use private speech to mediate thinking and accomplish tasks (McCafferty, 1992; McCafferty, 1994a; DiCamilla and Antón, 2004; Centeno-Cortes and Jimenez-Jimenez 2004; Ohta, 2001a). These studies show that L2 learners' private speech usually attracts no attention from teachers, but serves an essential role in the appropriation and internalisation process. Jimenez-Jimenez (2015) examines the use of private speech of Spanish-English bilinguals, finds that while independently engage in Spanish problem-solving activities, participants use both languages as private speech. But according to the language dominance, they tend to use the dominant language private speech more often. This study provides evidence for private speech's self-regulation function.

The previously mentioned studies have all focused on private speech deployed by learners in the L2, another interesting research angle has emerged in the recent research flow (de Guerrero, 2018), which concerns the involvement of L1 private speech during L2 acquisition (Wang and Hyun, 2009; Yoshida, 2009; Sonmez, 2011; Abadikhah and Khorshidi, 2013; Jimenez-Jimenez, 2015). In this stream of research, the focus is the role L1 plays in private speech use and to what extent learners rely on L1 for regulation.

Abadikhah and Khorshidi (2013) report that while advanced L2 learners externalise the thinking process more in the L2, the beginning learners predominantly produce L1 private speech. This study along with Jimenez-Jimenez's (2015) suggests that the involvement of L1 as private speech is largely dependent on learners' L2 proficiency. However, Smith (2007) claims that factors such as the nature of the task, classroom context and language background contribute to learners' language choice of private speech. Researchers see L1 private speech

in L2 tasks and activities bears the function to enhance the meaning-making, comprehension, concept-formation and production of L2 (de Guerrero, 2018; Lee, 2006; Wang and Hyun, 2009; Storch and Aldosari, 2010). The conclusion can be drawn from these research that L1 in the form of private speech, as a useful and existing mediational resource, self-directed by learners to facilitate the understanding and learning of the task and the L2. Especially for learners of low L2 proficiency, L1 private speech guides learners to accomplish cognitively challenging and demanding tasks and activities.

In the present study, the context is a beginner's L2 Mandarin Chinese classroom. The majority of the learners in this classroom has little or no profound contact with the language before they enrolled in the programme, including the focal learner S1 chosen for the research. With an SCT view, which considers self-directed private speech to be a useful mediational resource, S1's language use for his private speech attracts the researcher's attention to see whether S1 relies on private speech to appropriate mediational assistance and facilitates his own L2 learning.

2.4 An ecological view of language learning: Affordance

The ecological view towards language learning which advocated by van Lier (2000) has been built on the legacy left by Vygotsky and Bakhtin. The ecological approach to language learning asserts that social activities which learners engage, especially the linguistic and non-linguist interaction are central to the understanding of learning (ibid). The assertion echoes with the role of language and interaction in SCT (see Section 2.2). van Lier himself also admits that SCT has considerable value in research hold an ecological view to investigate cognition, language and learning (ibid: 250).

American psychologist James Gibson (1979) considers affordances are 'what the environment offers the animal, what it provides or furnishes, either for good or ill' (p.127). He also emphasises that the animal's awareness and perception about the affordances in the environment hold a vital role in determining the effectiveness and usefulness of affordances. The notion then is expanded to approach L2 learning and development, to be defined as a

relationship between a learner and the environment that signals an opportunity for action (van Lier, 2000, 2004, 2008b).

An affordance is a property in the environment that is relevant to an active perceiving organism, it affords further actions, but does not necessarily cause or trigger the actions (van Lier, 2000). To conceptualise the construct in the language learning context, it assumes that the learner actively establishes relationships with and within the environment, in participation and practice, perceives the semiotic affordances and uses them for further actions (Auyang, 2000; van Lier, 2004). The value and efficacy of a certain affordance are partly determined by how a participant perceives and values it, in turn, the perception and evaluation affect whether the learner makes use of it. Thus in summary, whether a resource is available and relevant in a learning context is largely determined by the learner. Only when a resource is considered relevant and picked up by the learner, then can it be seen as an effective affordance provided by the environment (Auyang, 2000; van Lier, 2008a; Thoms, 2014). SCT argues that when children engage in a practical task, the perception, speech and action unite as a holistic organism (Vygotsky and Luria, 1994), this view closely links to the ecological view of learning and affordance.

In sociocultural informed language learning research, L2 learners are considered active agents rather than passive recipients of the input (Verenikina, 2008). Moreover, learners are also co-constructors of meanings in the context, co-regulate the interaction with teachers and peers as learning proceeds. In an ecological view, learners are expected to take the initiative to make use of affordances available as learning resources to shape their learning experiences and developments through interaction (van Lier, 2008a). Affordances in the context provide a 'match' between learners and the environment (van Lier, 2004), thus the affordances are 'subject to contextual mediation' (Peng, 2011). Although the shift in L2 learning and development research has made the perception that language learning is fulfilled through dynamics and affordances to be familiar in the research field (see de Bot et al., 2013; Larsen-freeman, 2011; Verspoor et al., 2011), the operationalisation of affordances in empirical studies has stayed as challenging (Thoms, 2014). Few studies have attempted to implicate the

construct of affordance in L2 classroom contexts.

Miller (2005) investigates an ESL classroom in which she defines the affordance in situ as feedback cycles between teachers and learners, which unite input, interaction and output. Through the feedback cycles, the learners interact with the context, then develop writing skills as well as their self-regulation ability. She also contrasts the affordance-constrained and affordance-rich contexts, points out that the affordance-rich context displays organisation, feedback loops and a variety of learner agency.

Darhower (2008) focuses on analysing the linguistic affordances in telecollaborative text-based chats between L1 and L2 Spanish speakers. In this research, he defines affordances as discursive moves that provide linguistic information to a learner, or what intends and appears to activate learner's awareness of language structures and meanings (p.50). Through analysing the chat logs, he identifies the linguistic affordances in this particular context as checking comprehension, clarifying non-comprehension, providing meaning and translation, use of L1, to name a few. His work concludes that the text-based chat has the potential to provide various linguistic affordances for language learners. This study does not show how the participants of the interaction perceive and utilise linguistic affordances available in the context.

Thoms (2014) has posited the notion of affordance in the context of undergraduate L2 literature classroom. The researcher investigates the affordances in whole-class discussion activities, tries to uncover the features in teacher reformulation talk which constitute potential affordances for students. Affordance defined in this context as 'any discursive move (or a series of moves) involving a teacher and/or a student that emerged at particular moments in a whole-class discussion that was intended to clarify a participant's contribution to the unfolding talk' (p.729). The author considers that the function of affordance is to promote knowledge-building and meaning-making. He confines the interest of analysis to the teacher's reformulation in class, discovers three distinct features of affordance, which are termed as access-creating, funnelling and content-enhancing. Compared to Darhower's (2008) study,

Thoms reveals how participants perceive and make use of the affordances available.

In the limited number of research on affordance reviewed above, none of the research contexts resembles the current study, and all researchers have only defined affordances in precise to their particular contexts. This indicates that there is a gap for further research on the affordances and ecological view of language learning. In this study, regarding the features of the particular CFL classroom, the affordances available in the classroom interaction are defined as interactional moves conducted by the teachers or peer learners, which provide support for knowledge-building, meaning-making, deepening understanding towards the linguistic structures and meanings, thus furthermore, open learning spaces. For learners, the construct of affordance suggests that they need to become motivated and activated to perceive and make use of these affordances made available in the context.

2.5 L1 interaction in the L2 classroom

This study is posited in a CFL context, in which the learners are beginners of L2 Mandarin Chinese. It is revealed through the data that the use of English, the L1 of the majority of the learners, is pervasive in the classroom teaching. In order to fully obtain a holistic view of the mediation and mediational resources in this classroom, it is worthwhile to review the perceptions and approaches of L1 use in the L2 classroom.

The use of L1 in the L2 classroom used to be a controversial issue which attracted heated debates in SLA research area. It was widely advocated that in order to guarantee L2 development, exclusive or maximal use of L2 is required (Turnbull and Dailey-O’Cain, 2009). The popularity of exclusive and maximal use of the target language in the L2 classroom is theoretically based on the interactionist tradition of SLA research (van Compernelle, 2015). To be specific, Krashen’s (1982, 1985) input hypothesis, Long’s (1983) interaction hypothesis, Swain’s (1985) output hypothesis and DeKeyser’s (1993) research on feedback all try to justify that L2 learning and development depends on the amount and quality of L2 input along with opportunities and error correction learners receive in the class. With the guidelines as these, although these researchers have not explicitly claimed that L1

use hinders L2 acquisition (van Compernelle, 2015), L1 interaction is considered unfavourable in L2 classroom thus the effect and influence of L1 interaction is ignored (Macaro, 2009). This treatment of L1 use in L2 classroom triggers the pedagogical doctrine of maximal use of L2 as input, which meanwhile considers the use of L1 takes time and opportunities off from learners to be exposed to the L2 (Macaro, 2001, 2009; van Compernelle, 2015).

Conversely, a growing number of studies calls for the re-examination of L1 use in the L2 classroom (Waer, 2012). Those studies demonstrate that the use of L1 actually facilitates L2 learning and development in a variety of ways (see Turnbull and Dailey-O’Cain, 2009). Researchers have suggested theoretically principled and optimal use of L1 in L2 classroom (Cook, 2001; Turnbull, 2001; Levine, 2003, 2011; Liebscher and Dailey-O’Cain, 2004; Macaro, 2005, 2009). Macaro (2009, 2005, 2001) proposes a continuum of optimal L2 use in the language classroom based on his research about teachers’ beliefs and orientations to L1 use. One extreme of the continuum, is the exclusive use of L2, without considering the value of L1 at all, which Macaro calls the ‘virtual position’; then the continuum gradually moves to the optimal use of L2, which sees L1 as beneficial to language learning. Reported by Macaro, some teachers realise that L1 is necessary during teaching and instruction as a classroom management tool, but they still negatively treat L1 as undesirable. In some instances, this discouragement of L1 use poses difficulties for intersubjectivity between learners and language instructors (Antón and DiCamilla, 1999). Meanwhile, some other teachers are treating L1 as supportive and facilitative tools for L2 learning and development. One example is that L1 is more effective and time-saving in metalinguistic explanations, which usually involve unfamiliar or unknown metalanguage to learners, thus may render the learning to be ineffective and distract learners by causing more confusion (Turnbull and Dailey-O’Cain, 2009).

This view coincides with SCT’s main perception of L2 learning and development since language is considered the most powerful psychological tool for learning. As a vital linguistic resource which is already acquired and internalised through socialisation in childhood, for

adult L2 learners, L1 mediates learners' internalisation of L2 forms, meanings and functions. L2 development from SCT perspective is centred about expanding one's semiotic resources— patterns and meanings of languages which can be used in interactional activities (Lantolf and Thorne, 2006, 2007). Hence, as long as the extent of L1 use, as a mediating device, facilitates the expanding process, L1 use in L2 classroom is warranted (van Compernelle, 2015). The exclusive use of L2 in the classroom restricts learners from accessing a powerful psychological mediational tool for learning. Moreover, the exclusive use of L2 imposes an artificial, inauthentic and idealised context for language learning (ibid) as well as for multilingual and cross-cultural interaction.

Researchers argue that L1 in L2 collaborative dialogues construct L2 linguistic knowledge around learners, especially when learners and teachers share the same L1 background (Swain, 2000; Cameron, 2001; Raschka, Sercombe and Chi-Ling, 2009). In the field of SCT research of SLA, researchers uncover that L1 serves both interpersonal and intrapersonal functions during L2-relevant language tasks (Donato, 1994; Antón and DiCamilla, 1999; Swain, 2000). In some L2 activities and conversations which focus on metalinguistic or sociolinguistic knowledge, use of L1 or code-switching to L1 creates space for learners to think and reflect on their own performance. This effect might not be able to be activated only through the L2. In addition to the interpersonal mediation done by L1 in collaborative interaction, L1 also used by learners themselves for self-regulation (see Section 2.3.3). This intrapersonal mediation is mainly done through private speech (see Section 2.3.6). According to SCT, L1 and L2 private speech is ontogenetically social and internalised by learners as psychological tools for thinking and development (Vygotsky, 1978; John-Steiner, 2007).

A number of SCT studies have been conducted on the pedagogical activities carried out with the integration of L1 (van Lier, 1996; Antón and DiCamilla, 1999; DiCamilla and Antón, 2004; van Compernelle and Henery, 2014; Walter and van Compernelle, 2015). These research explore how L1 can facilitate the metacommunicative activities in L2 learning, such as expressing intended meaning, conscious learning and correcting of L2 performance. Swain et al. (2009) point out that from SCT perspective, it is impossible to encourage L2 learners to

engage in cognitive activities in the L2 when the L2 is not sufficiently developed as a psychological tool to the level for concept formation. Research (van Compernelle and Henery, 2014; Walter and van Compernelle, 2015) on elementary learners of French and German discover that when learners' proficiency of the L2 is only at a novice level, teaching and developing L2 concepts through the L2 is non-optimal. It would be a waste of time and effort as learners' L2 capabilities are far from sufficient to regulate and mediate their internal psychological functioning.

In recent years, the concept of 'translanguaging' becomes trendy in educational settings in describing language practices (Mazak, 2016). The term 'translanguaging' is originated from the work of Williams (1996), which focuses on the Welsh-English bilingual education. It is used first as a descriptive label (Li, 2018) for a pedagogical practice in which the input is in one language while learners' output is in another language. More recently, Garcia (2009) defines translanguaging as the use of '*multiple discursive practices* in which bilinguals engage in order to *make sense of their bilingual worlds*' (p.45, emphasis in original). According to Li (2011, 2018), translanguaging is the fluid, dynamic and transformative linguistic performance that includes different modes and features of the speaker's repertoire. It goes between and beyond different structures and the combination of structures. Mazak (2016:5-6) later then articulates translanguaging as an encompassing concept that covers five tenets:

- translanguaging as a language ideology (treats bilingualism as a norm);
- as a theory of bilingualism (that bilinguals possess one integrated repertoire);
- as a pedagogical stance (teachers and learners are allowed to draw on all available resources for teaching and learning);
- as a set of practices;
- and being transformational in inventing and re-inventing language practices during meaning-making.

Through the moment analysis of the language practices of three multilingual Chinese youths in the UK, Li (2011) reveals the critical and creative choices and use of languages by these

young men in the *translanguaging space* (Li, 2011, 2018), in which the social spaces are constructed. Carroll and Sambolín Morales (2016), with a translanguaging perspective, investigate the use of L1 as a resource in the university ESL reading class. By reflecting on the macro-, meso- and micro-level language policies and ideologies in their context, with the analysis of the interview data and learners' written work, they conclude that the translanguaging approach used in this particular classroom enhances learners' reading ability, constructs meaning and builds on learners' cultural knowledge. Allard's (2017) ethnographic study examines the translanguaging practices of two teachers in a high school ESL programme in the US. This study takes into consideration the pedagogies, language policies, ideologies and interpersonal relationships in the context. The findings suggest that translanguaging pedagogy will be fully effective only when the practices and ideologies in and beyond the classroom affirm and support bilingualism and bilingual learners.

For the CSL context, Wang (2016) looks at learners' and teachers' attitudes and practices towards translanguaging. With the data drawn from the questionnaire, interview and classroom observation, Wang largely focuses on the classroom language ideologies and language choices from both the learners and teachers. This research advocates that in an emerging linguistically diverse context such as the CSL classroom in China, the monolingual teaching approach (e.g., Chinese-only approach and ideology in this particular research) needs to be challenged, learners and teachers need to renew their knowledge and ideology about language teaching and learning.

With the rising popularity of translanguaging, it is worthwhile to pose the question that whether the term 'L1 use' is outdated in the current SCT case study research. The term 'translanguaging' and the tenets it encompasses seem promising in the context of L2 teaching and learning. However, there exist differences between translanguaging and the SCT perspective to language learning and development. According to the aforementioned Mazak's (2016) five tenets of translanguaging, it is a language ideology which concerns the linguistic and semiotic practices of bilinguals and bilingualism. As a language ideology, translanguaging often associates with language policies at different levels and speakers' social, political and

cultural attitudes and perceptions. This is evident in a few empirical research reviewed in the previous section (Li, 2011; Carroll and Sambolín Morales, 2016; Wang, 2016; Allard, 2017). Li (2018) also argues that translanguaging is a practical theory of language, which decomposes multilinguals' use of multimodal and multisensory resources in social interaction (p. 9). Although SCT does see the social, political and cultural experiences as mediational resources which are able to facilitate learning, in general, it is a theory of learning and development of human being (Lantolf and Thorne, 2006). SCT's concerns and focuses go beyond the human social interaction and the linguistic and semiotic resources embedded within it. SCT perspective to language teaching and learning is not only interested in the linguistic and semiotic practices in interaction, but also in how these practices influence and impact the human developmental process holistically at both interpersonal and intrapersonal levels.

Researchers who advocate the concept of translanguaging claim that the linguistic repertoire bilinguals/multilinguals have is an integrated repertoire rather than separate named language systems (e.g., Li, 2011, 2018; Garcia and Otheguy, 2014; Mazak, 2016). Nonetheless, this claim is controversial while there is evidence from bilingual research and neurolinguistics shows otherwise (see MacSwan, 2017). Moreover, SCT is not a language theory, instead, it is a theory of mind (Vygotsky, 1978; Wertsch, 1985; 1991; Frawley, 1997) and development, which does not explicitly propose a formal theory about what language is and how language operates (Mitchell and Myles, 1998). SCT's view of language is commensurable to those theories of language that focus on meaning, interaction and cognition, rather than those focus on formal linguistics and structural properties (Lantolf and Thorne, 2006). Thus, it is beyond the scope of SCT perspective of language learning towards the discussion of the separation or unity of L1 and L2 for bilinguals/multilinguals, SCT considers that linguistic and semiotic resources, be it L1 or L2, as socially constructed cultural artefacts, to be mediational means for human higher functioning and development.

Although translanguaging and SCT perspective of language use differs in aspects, they share the same view towards pedagogy and interactional practices. That teachers and learners are

drawing on a variety of resources, including L1, L2 and other semiotic resources during classroom interaction and activities to facilitate learning. As an SCT case study heavily inspired by the emic perspective, the social, political, cultural associations which implied by the term ‘translanguaging’ will only be considered when they are made relevant by the participants in particular interactions. Thus being cautious, in the present research, in regard to the use of different languages in the classroom, the term ‘L1/L2 use’ will remain.

In CSL contexts, such as L2 Chinese programmes in Chinese universities, the negative rhetoric towards the use of L1/English in classrooms has been long established in both teaching practices as well as in teacher training programmes (see Wang, 2016). The perceptions of L1 use in CFL classrooms are yet under-researched. In CFL contexts, the classroom interaction research regarding the intertwined relationships between learners’ L1 and L2 Chinese is scarce. Under such circumstances, the current research, bearing an SCT view, values the interpersonal and intrapersonal mediational functions of L1. Considering the context as a beginner’s L2 Chinese classroom, to the contrast of the monolingual teaching approach which has long been the norm in the language classroom (Blackledge, 2000; Garcia, 2009b; McMillan and Rivers, 2011; Makalela, 2015), I consider the L1 in this context to be an indispensable resource, which can not and should not be excluded from the classroom interaction. It is a valuable interactional and cognitive resource for both the teachers and focal learner to make meanings and build on knowledge and interpersonal relationships which would then facilitate learning and ultimately, development. While considering L1 as an essential resource in the classroom, the findings reported in Chapter 4 will present how L1 is used by the teachers at the interpsychological level and by the focal learner himself at the intrapsychological level to facilitate his L2 micro-development.

2.6 Gesture as a dimension of mediation

2.6.1 The mediational function of gesture

As iterated in the previous sections, in a sociocultural view, language not only conveys meaning but also regulates thinking (Vygotsky, 1978, 1986). In this section, an important semiotic mediational resource—the use of gesture, will be discussed.

Although Vygotsky only pays partial attention to the gesture, he has stated its interpersonal function through the depiction of examples of child pointing gestures (Vygotsky, 1978). Vygotsky and Luria (1994) include gestures as part of the holistic semiotic kit in which linguistic and non-linguistic resources unite to mediate learning and development. McNeill (1992, 2005b) builds on Vygotsky's perspective, argues that the gesture is not the accessory to speech, but dialectically intertwines with speech to co-express meanings in interaction. This perspective demands that gestures be seen as a valid mediational component in L2 teaching and learning (Lantolf and Thorne, 2006). SCT researchers have considered the learning process as social interaction fulfilled through semiotic mediation. The term 'semiotic mediation' suggests that the human mind understands the physical world by negotiating the meanings of signs and symbols available in the sociocultural environment (Daniels, Cole and Wertsch, 2007). Learning a second language not only encompasses the learning of specific linguistic forms, but it also is a process of understanding the signs, symbols and cultural norms underlying the linguistic forms (Lantolf and Pavlenko, 1995).

Like speech, gestures server both interactive functions and cognitive functions (Lantolf and Thorne, 2006), create a sense of 'shared social, symbolic, physical, mental space'(McCafferty, 2002: 192). In the L2 classroom, gestures afford teachers and learners the similar opportunities provided by speech, to mediate participants' conceptualisation of the L2 in class. Meanwhile, rely upon gestures, teachers and learners are also able to make adjustments in accordance with the changing understanding of the context (Smotrova and Lantolf, 2013). Thus as a vital dimension of human interaction and mediation, gestures bear special research attention.

2.6.2 Research of functions of gesture in L2 teaching and learning

There are a great number of research conducted in general educational contexts to depict the beneficial functions of gestures in classrooms (e.g., Goldin-Meadow et al., 2009; Roth and Lawless, 2002; Wang et al., 2004). Several experimental research has shown that gesture-accompanied explanations in teacher talk enhance learners' understanding and are more

effective in problem-solving activities (Goldin-Meadow, Kim and Singer, 1999; Valenzeno, Alibali and Klatzky, 2003; Singer and Goldin-Meadow, 2005). The mediational function of gestures has already been proven effective in both situations that learners deliberately or are instructed to imitate teacher gestures. The existing research regarding the use of gestures in L2 classrooms focuses on three themes: 1) the use of gestures by teachers to enhance learner understanding; 2) how learners enact thinking processes through gestures; 3) student imitation of teacher gestures (Smotrova and Lantolf, 2013).

Moskowitz's (1976) research is one of the very first that connect teacher gestures with high-quality teaching, this research finds that teacher gestures impact L2 learning. In more recent time, the quasi-experiment research of Sueyoshi and Hardison (2005) focuses on the effect of nonverbal behaviours on L2 comprehension. They report that the learners benefit more from gesture-accompanied, and gesture/facial expression-accompanied lectures than from the audio-only version of the same lecture. Four major types of gestures identified in this research are beats, iconics, metaphors and deictics (p. 675), according to McNeill's (1992) taxonomy. They also suggest that learner proficiency plays a role. While high proficiency learners perform better in facial-only condition, low proficiency learners perform better when both gestures and facial expressions are available during the lecture. Lazaraton (2004) has investigated the gestures in teachers' unplanned lexical explanations to learner-initiated questions in the grammar class. The microanalysis of the interaction shows that the teacher's nonverbal behaviours are an important component of lexical explanation, thus improves the '*quality of input*' (p.107). For example, while conveying the meaning of 'putting', the teacher moves both of her palms down to represent the physical action of 'putting'. As the focus of the study is not the learner uptake of the gesture, Lazaraton makes no claim of the impact of the gesture on learner understanding. The result is that the gesture enhances the verbal input to be more comprehensible (p.110).

On the contrary, Allen's (2000) research focuses on the learner perception of gesture use during teaching, includes learners' written reflection of the gesture use in the data, which suggests that the gesture helps learners to maintain the focus, creates the relaxed atmosphere

that leads to better understanding of the L2. The teacher in this study employs seven emblems (e.g., thumbs up for *good*, yawn for *boring*) and eight types of iconic gestures and beats (e.g., ‘batons’ to accentuate a certain word or phrase). Allen makes the suggestions that conscious use of gestures in vocabulary explaining and classroom management is needed in teacher training.

Two more detailed studies regarding learner perception are conducted by Sime (2006, 2008). In these studies, L2 learners’ responses to teachers’ gesture use have been observed. The findings elucidate the learning of linguistic information and learners’ awareness of language is enhanced through teachers’ gesture use. For instance, while explaining the transaction between a buyer and a seller, the teacher’s hand forms a container gesture to represent a ‘house’, then he uses deictic gestures pointing at himself and the student to indicate ‘buyer’ and ‘seller’. The learners interviewed agree that these gestures clarify the linguistic meanings (Sime, 2008). Furthermore, through teacher gestures, the learners are able to focus their attention on specific aspects of instructional explanations, then validate their learning hypotheses of the L2 linguistic features. As Allen (2000) does, in both research, Sime (2006, 2008) suggests that the teacher awareness of gestures should be included as an integral component of teacher training programmes. She furthermore proposes that L2 learners should also be explicitly prepared to pay attention to teachers’ gestures in classroom activities.

Other similar research includes Allen (1995) and Tellier (2008), who investigate the child and adult learners of French. Their conclusions are that gesture-accompanied verbal explanations benefit long-term learning, and learners’ use of gestures enhances recalling and memorising L2 vocabulary, although the overall effect might be low. These studies have attempted to analyse learners’ perceptions towards teachers’ gesture use in class and show important pedagogical implications for L2 learning. However, the result has relied on the self-report accounts from learners, not the scrutiny of the classroom interaction data for the use of gestures in situ.

The aforementioned studies are all more or less carried out as quasi-experiments. Conversely,

another stream of research has adopted an interactional perspective towards the understanding of the role of gestures in the classroom, shifts the focus from teacher-learner performance in pre-designed experiments to observation and analysis of classroom interactions. Zhao's (2007) work has directly focused on the teacher gesture and its appropriation in the conceptualisation of metaphors in the classroom peer review sessions, learner presentations and learner-teacher conferences about the L2 English academic writing. The research reports that learners' imitation of gestures might indicate learners' developing understanding of North American academic writing. Faraco and Kida (2008) analyse L2 teacher and learners' nonverbal behaviours in signalling and responding to communicative difficulties in the classroom. The teacher in this research is able to interpret learners' difficulty signals, but the positive learner uptake of the teacher assistance is not guaranteed. The teacher gesture often creates ambiguities for the learners, as the gesture synchronises more with the repetition of the difficulties rather than with the recasts and corrections.

Besides the interactional perspective of gesture research, other researchers have also examined the beneficial functions of gesture use, among which many have adopted a Vygotskian perspective. McCafferty (1998) investigates relationships between gestures and private speech in learners' performance in a narrative task. He concludes that the gesture in itself, acts as a self-regulatory tool; there are possible cross-cultural and proficiency differences in learners' self-regulatory gesture use. Lantolf (2010) shows how an advanced learner of L2 French uses gestures to help to appropriate the verbal aspects in the re-narration task. van Compernelle and Williams (2011) elaborate on how L2 French learners mediate their own understanding through the use of gestures in the metalinguistic awareness-raising task in small group work. For example, during the discussion of the meaning of French pronoun *on* (means *one*, but can mean *we* in informal occasions), one learner produces two deictic gestures pointing to the two potential meanings of *on*. By doing so, the learner metaphorically lays the two meanings in two spatially distinct areas. The use of the gestures here mediates the learner's own understanding of the pronoun (p.211-213). The study argues that the research on speech-gesture activities broadens the research understanding of learners' thinking process. Smotrova and Lantolf (2013) through the microanalysis of classroom

interaction of lexical explanations in two adult EFL classrooms, uncover how re-current gesture-speech synchronisation, which is theorised by McNeill (1992, 2005) as *catchment*, as a potential mediational means, contributes to the learning of L2 lexical items. For instances, when introducing the phrase ‘take off’, the teacher synchronises it with an iconic gesture which traces the upward trajectory of a plane taking off. The recurrent synchronisation helps the learners’ understanding and appropriation of the phrase in the later session of the class. These studies have demonstrated that gestures as mediation allow at least partial access to cognitive thinking processes.

Hudson’s (2011) in-depth analysis of L2 classroom interaction investigates the teacher and learner gesture use in an eight-week beginners’ ESL programme. The analytic focus is more on the teachers’ gesture use in explaining L2 pronunciation (e.g., iconic gestures formed by fingers to demonstrate the mouth shape of certain sounds), lexical items (e.g., iconic gesture that imitates the form of a *headset*) as well as grammar (e.g., pointing to the back to illustrate the simple past tense). The research identifies the types of gestures used in L2 teaching in the particular classroom, describes instances of learner imitation of teacher gestures. The findings suggest that the teachers’ gesture use is different from that in ordinary conversation. The researcher then concludes that teacher gestures as part of ‘*teacher foreigner talk*’, occur with higher frequency, span in larger space, and infuse with more information redundancy in improving learners’ understanding. Hudson’s research provides a taxonomy of gestures used by both teachers and learners, but does not analyse in detail the gestures in specific teacher-learner interactions.

In the present study, the phenomenon of gesture-speech alignment has also been observed in this beginners’ L2 Mandarin Chinese classroom. Following the SCT research flow, I consider gestures as another dimension of mediation and an important embodied resource and affordance for L2 learning. In Chapter 4, instances of gesture-speech alignment will be presented through classroom teacher-learner interaction, to reveal that how one of the teachers’ gesture-accompanied speech in mediation has influenced the focal learner’s understanding of the L2 meanings and concepts in problem-solving activities.

2.7 Research of learning Chinese as a foreign/second language

In this section, the recent research on learning and teaching of Mandarin Chinese as a foreign/second language will be reviewed. Firstly, the research focuses on the acquisition of formal linguistic properties of the language will be briefly summarised. Secondly, the research focuses on the L2 Chinese classroom, and the interactional mechanisms within it will be discussed.

2.7.1 Existing SLA research of L2 Mandarin Chinese

The teaching of Mandarin Chinese in contemporary time has had decades of history. In the People's Republic of China, the systemic and formal teaching of Mandarin Chinese as a second language dates back to the 1960s (Liu, 2000). Yet the teaching of Mandarin Chinese to Speakers of Other Languages—'TCSOL' as nowadays it is called in Chinese academia, has not been established as a discipline in Chinese Applied Linguistics until the 1990s (ibid). Although in the western contexts, compared to the L2 studies of other European languages, the research of L2 Mandarin Chinese acquisition is still a new area, numerous studies have already been conducted on TCSOL contexts in the past few decades (see Zhao, 2011). The research findings have been verifying, modifying and challenging the results, conclusions, perceptions and theories which were based on the SLA research of European languages (Zhao, 2011).

Mandarin Chinese, typologically as an isolating language from the Sino-Tibetan language family, has some distinctive linguistic features that are salient to the study of the acquisition of L2 Mandarin Chinese. Some of these linguistic features are (Li and Thompson, 1981; Yip and Rimmington, 2004; Zhao, 2011):

1. the categories of measure word
2. no inflectional morphology
3. lacks the grammatical categories such as case, gender, tense and aspects, which needs to be fulfilled alternatively through the grammatical realisation of sentence order and context

4. topic prominence
5. temporal aspect markers
6. unique constructions such as *ba* and *bei*

The existing research on L2 Mandarin Chinese acquisition largely focuses on the acquisition of particular linguistic aspects of morphosyntax of the language. Researchers try to explain the potentiality of acquisition and its order of the morphological, syntactic and grammatical aspects. Most of these studies are cross-sectional research follow the experiment method or with the data collection method of questionnaires with small samples (see Zhao, 2011). A heated theme in these research is the L1 transfer and its influence during L2 Chinese acquisition. Through the cross-linguistic comparisons and research on the linguistic aspects, researchers investigate the L2 Chinese acquisitions of learners of L1 Japanese (Yuan, 1998; Zhao, 2006), L1 English (Huang and Yang, 2004; Huang *et al.*, 2007) and English-Chinese, German-Chinese and French-Chinese interlanguages (Yuan, 2001, 2004). As Mandarin Chinese typologically lacks inflectional morphology, which differentiates with the majority of learners' L1, Jin (2009) reports that this typological feature contributes to learners' choice of simplistically equating some L2 grammatical structures with the similar L1 categories or structures.

2.7.2 L2 interaction research in teaching and learning Chinese as a foreign/second language

Compared to the numerous studies of L2 Chinese acquisition focus on the acquisition process of the formal linguistic aspects of the language in both CFL and CSL contexts, few studies have been carried out to focus on the dynamic classroom interaction in L2 Chinese classrooms.

Rylander (2009) investigates the instructor-initiated repair in meaning-and-fluency context (Seedhouse, 2004b) in a CFL classroom. With a conversation analysis approach to describe the repair practices in detail, the researcher questions the reflexive nature of pedagogy and repair practices. Different results and distinct speech exchange systems have been identified

in this particular CFL classroom, to which less attention has been paid in previous interaction-based research. Since only part of the findings agree with Seedhouse's (2004) proposed framework, thus the researcher argues that the data from this CFL context to be the deviant cases to Seedhouse's categorisation framework. This argument provokes the reconsideration of the proposed framework. Thus Rylander advocates that data from a different educational context could be used to question the existing classroom discourse framework generalised from similar contexts. The deviant cases present through the CFL classroom in this study suggest implications for classroom research in a general sense. The research on such L2 classrooms, in which the target language is typologically and linguistically different, not only will provide empirical examples to support the existing theories, but also has the potential to pose challenges and contradict the premature theories and categories, hence, will broaden and consummate these research categories and theories.

Simpson et al. (2013) also choose to observe the repair practices in an L2 Chinese classroom. In contrast to Rylander (2009), Simpson and colleagues locate their study of self-initiated self-repair (SISR) in a CSL context in China. Discourse analysis approach has been adopted to investigate the SISR practices of four low-intermediate L2 learners of Mandarin Chinese, to find out how learners orient to SISR, and what are the functions SISR serves in the learning activities in a speaking class. Through the analysis of the audio-recorded data and stimulated recall interviews, the researchers identify five broad categories of SISR: replacement, addition, asking for L2 forms, checking and code-switching. The study concludes that the learners use SISR in a wider range of functions than it is often assumed. The findings partially confirm the existing perceptions that SISR reflects learners' L2 proficiency and progress, and its ability for learners to self-monitor their L2 (see van Hest, 1996; Kormos, 1999; Fincher, 2006; Smith, 2008). However, it is still a weaker indicator of language acquisition and L2 proficiency, the link is less clear-cut than previously assumed. This study only investigates four learners' SISR practices through audio-recordings and interviews. It does not investigate the teacher's responses and the interactions between learners and the teacher, thus reveals fewer classroom dynamics.

Cheng's (2013) research uses conversation analysis (hereafter CA) as the analytic approach, scrutinises the practice of code-switching (CS) and examines one beginning L2 Chinese learner's participant orientations at a North American university. Although the analysis mainly focuses on the converging and diverging orientations of the teacher and the learner in the assessment talk and instructional learning activity, it is found that the learner's use of L1 as interactional resources, emerges naturally to maintain the interaction. The learner relies heavily on L1 as he is not able to perform simple understanding checks and clarification requests in L2 Chinese. Accordingly, Cheng calls L2 Chinese practitioners to take into consideration the teaching of L2 basic expressions for clarification requests to develop learners' L2 interactional skills. This study elucidates that language teachers and learners use all the linguistic resources, both L1 English and L2 Chinese to maintain interaction. The findings broaden the empirical understanding of beginners' L2 Chinese classrooms in CFL contexts.

Tsai and Chu's (2017) mixed-method research uses the online Chinese courses to uncover learners' use of Chinese discourse markers (DMs) in both CSL and CFL contexts, and compares them with that of the native speakers (the teachers, in this study). They argue that the frequency and appropriateness of DMs use reflect learners' L2 Chinese fluency and richness of L2 use. It is also observed that the frequency and functions of DMs in the CSL group are much higher and wider than the CFL group, which only shows limited use of DMs. The result of this study shows similarities with the research about DMs use of L2 English learners (Fung and Carter, 2007; Hellermann and Vergun, 2007; Liao, 2009). Based on their results, Tsai and Chu make suggestions on assessment and syllabus design for L2 Chinese pedagogy.

The above-reviewed studies about the interaction and learning of L2 Mandarin Chinese adopt conversation analysis approach or discourse analysis approach to examine and explain the relations between interaction and learning in CFL/CSL contexts. Their empirical findings contribute to the broadening understanding of the interaction and classroom interactional mechanisms in a variety of contexts of L2 Chinese acquisition, meanwhile challenge the

existing theories, categories and frameworks derived from the interaction research of the L2 acquisition of English. In Rylander (2009), Simpson et al. (2013) and Cheng (2013) studies, only audio recordings of the classes are obtained for further analysis. The data neglect the non-verbal and embodied interaction in the dynamic language classrooms. In Tsai and Chu's (2017) study, although for practical reason, the data are gathered through video-conferencing software which makes the visual images of the class available to the researchers, they do not pay attention to the embodied interaction while analysing the discourse.

By intensively reviewing some of the existing research regarding the interaction and learning in L2 Mandarin Chinese classrooms, it can be seen that the interaction and learning in L2 Chinese classrooms is under-researched, especially when compared to the enormous body of research on the acquisition of L2 Chinese linguistic aspects, which is briefly reviewed in the previous section. Among the existing research in L2 Chinese classroom, a majority of the research has adopted the CA approach and perspective, to my knowledge, few studies in this area have closely investigated the interaction from an SCT perspective to uncover L2 Chinese learners' linguistic and interactional development and its relation to the mediation and assistance provided in the context. Taken into consideration of the increasing popularity of Mandarin Chinese in the area of language learning in the UK (Zhang and Li, 2010; Pérez-Milans, 2015), there is an urgent need for L2 Chinese SLA researchers to contribute more empirical evidence to the area, hence to guide educational practitioners and L2 Mandarin Chinese teachers in teaching practices from a variety of aspects. The present study is theoretically and methodologically underpinned by SCT, it centres the vital role of language and interaction during classroom teaching. Through the scrutiny of the interaction and mediation embedded within it, this study tries to contribute new empirical evidence and findings to the research area of L2 Chinese acquisition in the CFL context from another angle.

2.8 Summary

In this chapter, the theoretical underpinning of the study—SCT, and its relevant constructs are discussed, along with the review of the existing research on SCT-informed L2 studies. Section 2.2 introduces the theoretical framework of SCT, illustrates the mediated nature of human

higher functioning. An individual's L2 development originates from the interaction with other participants in the context, meanwhile, it is mediated by the most important symbolic artefacts in human society—languages. Section 2.3 first intensively reviews a group of important notions in SCT, elucidates that the L2 development needs the internalisation of the mediated L2 knowledge, forms and concepts, which relies on the mediational resources and processes made available through the mechanisms in interaction such as scaffolding and (co-)regulation. Imitation and private speech are two powerful tools for learners to link the mediation at the interpersonal social plane to the intrapersonal cognitive plane which ultimately benefit the learning and development.

Section 2.4 discusses the SCT-informed inspiring ecological approach of L2 teaching and learning, provides another angle to perceive affordances and learning opportunities in the context. Learners are expected to be active agents in various learning environments to appropriate the affordances emerge within it. Section 2.5 reviews the beneficial role of L1 in L2 classrooms. From the SCT perspective, L1 is a resourceful psychological tool for learners and teachers to maintain intersubjectivity and solve challenging language and interaction tasks before learners develop mature, adequate L2 competence. Gestures embody meanings in human interaction, thus in SCT, the gesture is part of the semiotic toolkit for mediating learning. Section 2.6 discusses how gesture is perceived within the sociocultural framework, its vital role as another dimension of mediation is elucidated that gesture-accompanied interaction affords learners more learning opportunities.

These SCT constructs and relevant concepts interrelate and interconnect with each other in the learning environment to collaboratively and interactively influence upon the learning and developmental process. To wrap up this interconnectedness, Figure 2.2 below shows how they act in an ecological way within learners' ZPD in the context of the present study to afford learning and developmental opportunities for L2 learners.

As the last part of the literature review, Section 2.7 provides a picture of the existing research on L2 Mandarin Chinese acquisition. While most researchers in the area focus on the

acquisition of linguistic aspects of L2 Chinese, limited attention has been paid to L2 Chinese interactional research. The reviewed research on L2 Chinese classroom interaction shows diverse results, moreover, those studies signal a need for more empirical research to be carried out in future for better understanding of the CFL/CSL contexts.

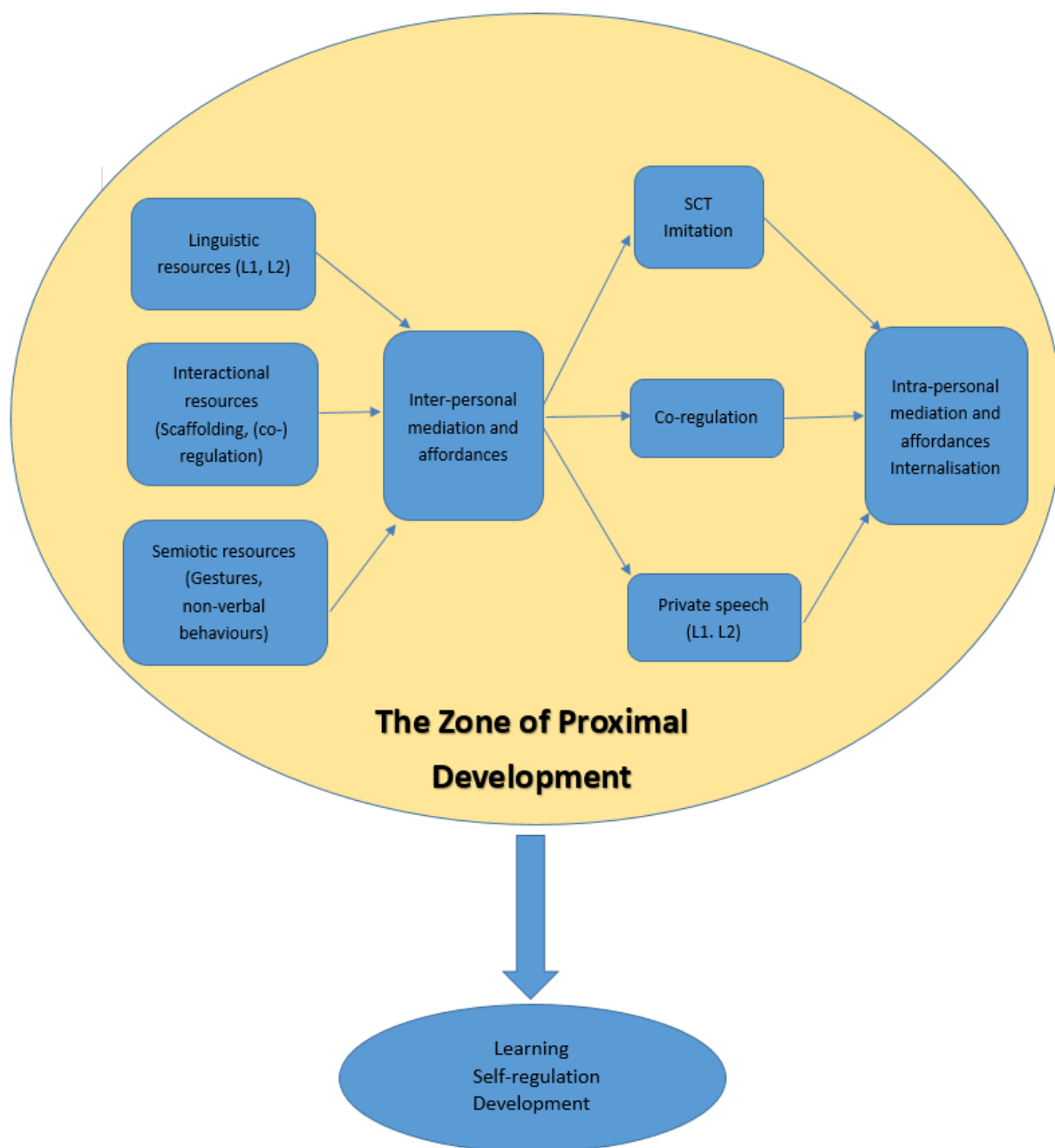


Figure 2.2 the SCT constructs in mediation and affordances in the ZPD

Chapter 3. Methodology

3.1 Introduction

As a revelatory empirical research project, the case study approach is employed in the present study to unveil the classroom teaching and learning activities and processes, while SCT framework provides the theoretical and methodological underpinnings and guidelines. With the research question of how learning is mediated in classroom interaction and learning, in the present study, at the analytical level, the microdiscourse analysis approach (van Compernelle, 2013, 2015) is used to analyse the microscopic details of the interactional practices, to reveal the moment-to-moment construction of mediational assistance. In this chapter, Section 3.3 and 3.4 explain the rationale and plausibility of the methodological choices. The research design of the current study is also presented. First, the context, participants and relevant information of the research setting will be described in Section 3.5 and 3.6. Then Section 3.7 and 3.8 elucidate the detailed data collection process, methods and procedures for data treatment and analysis. Section 3.9 then discusses the validity, reliability, generalisability and reflexivity of the present study.

3.2 The research question

The research question this study intends to address is as follows:

How is learning mediated in a Chinese as a foreign language classroom at a UK university?

Underpinned by SCT principles and framework, this study aims to investigate the role of assistance in the L2 teaching, learning and development in the classroom. It also tries to map how the mediation is carried out by the language teachers and becomes effective for one L2 Chinese learner's L2 micro-development.

3.3 Sociocultural research methodology

3.3.1 The genetic method

In SCT domain, there is a close relationship between the theory and the methodological research approach (Lantolf and Thorne, 2006). SCT's central argument is that mediation, such as scaffolding and assistance embedded in interaction is the primary venue for learners'

development (Vygotsky, 1978, 1981). Consequently, the analysis of L2 learners' learning and development should focus on the socially and culturally co-constructed interaction processes. Kozulin (1990:135) explains the central goal of SCT is to elucidate 'how such supposedly individual psychological phenomenon (memorization, decision making, concept formation, strategic orientation to problem solving) depend on historically specific cultural system of mediation'. These conceptualisations of the analytical focus in SCT indicate that a study which is interested in uncovering learners' development needs to scrutinise the process of mediation and appropriation in interaction.

Vygotsky (1978) argues that the SCT methodology should allow learners to be active agents who are able to control their own behaviours, then the researcher would observe how learners' higher mental functions emerge and develop. In order to comply with the central argument of SCT, the genetic method is proposed (Vygotsky, 1981). As a developmental approach, the genetic method traces the process in which learners internalise new knowledge, and later use this new knowledge to mediate their learning activities. In the genetic method, the historical character of learning and social nature of human activities are combined. Vygotsky and his followers have extended the genetic method into four distinctive research domains: phylogenesis, sociocultural history, ontogenesis and microgenesis. Phylogenesis refers to the development of organisms, focuses on how human mental functioning develops differently from that of animals. Sociocultural history refers to how the use of symbolic tools affects the cultural development of mind. Ontogenesis refers to the development of an individual, while microgenesis means the development of a specific process during ontogenesis.

Among these domains, microgenesis is the one more relevant to L2 learning and development research (Lantolf and Thorne, 2006). It is the development observed during a very short time, even in seconds or fractions of a second (Vygotsky, 1978; Lantolf and Thorne, 2006; Swain and Ping, 2007; Ganem Gutierrez, 2008; van Compernelle, 2015). The genetic method applied to the language classroom requires researchers to focus on the process of the establishment of higher mental functioning, rather than the product of development (John-Steiner and Mahn, 1996). This method of enquiry, on the one hand, provides an insight for

research of the emergent process of the L2 in the classroom, makes the observation of microgenesis and ontogenesis possible. On the other hand, the method could deepen the understanding and awareness of how microgenesis and ontogenesis, that is to say, learning at a micro-level and learning on a longer timescale, are dialectically interrelated.

Constrained by the time limit and other practical issues encountered during the data collection, instead of looking at the learner's longitudinal L2 ontogenetic development, this study focuses on the learner's micro-development. Vygotsky's view of learning and development differs with other theories of learning on what learning means and entails (van Compernelle, 2015), Cole (2009) points out that Vygotsky sees learning and development as a dialectical entity (for a detailed discussion of learning and development in SCT, see Section 2.2.4). L2 development in SCT is not the learning that accumulates L2 linguistic and metalinguistic knowledge, but refers to 'a qualitative transformation of mental functions' and 'the emergence of consciously controlled, and goal-directed, L2 use' (van Compernelle, 2015:38). Follows the SCT research thread and the microgenesis domain in the genetic method, micro-development in the context of this study, is defined as the Vygotskian development observed during a very short time, includes the learning of a single L2 feature (e.g., a pronunciation, a word, a grammatical structure or an L2 concept) during a very short time.

Micro-development in this study differs from the notion of 'uptake'. Learner uptake has been related to teachers' corrective feedback (Lyster and Ranta, 1997). Ellis and colleagues (Ellis, Basturkmen and Loewen, 2001:286) define learner uptake in a broader perspective, as a learner's optional move occurs as a reaction to the proceeding moves of other participant(s) of the learning activities. It happens when a learner displays a knowledge gap (e.g., failing to answer a question, asking a question, or making an error). Uptake would be regarded as successful when a learner can use an L2 feature correctly or has understood a feature (ibid). It can be seen from this definition that learner uptake is observed as an action and response to the interactional moves of others, it is learners' reaction at the interpersonal level. Learner uptake could not be seen as the evidence of acquisition, it may 'create the conditions' and be

'facilitative' for acquisition (ibid: 287). Micro-development from an SCT lens entails not only learners' reactions and responses to other participants' interactional moves at the interpersonal level, but also encompasses learners' qualitative transformation of the understanding of the L2 feature at the intrapersonal level. For a learner to be deemed to have the micro-development, he/she must show that the L2 feature is internalised and under the conscious control and self-regulation, more than merely understand or use the L2 feature correctly.

The present research is interested in how learning is mediated. It focuses on the provision and appropriation of mediation in a CFL classroom, aims to trace the process of mediation in the naturalistic classroom interaction. In this sense, theoretically, SCT and its constructs provide a significant framework to approach the classroom interaction in this CFL classroom.

Practically, the need for scrutiny of the process of mediation in classroom interaction, determines that the analytic focus should be the mediation and learning process, to which the genetic method supplies a means to analyse the data. The various SLA studies in L2 Mandarin Chinese reviewed in Chapter 2 draw the picture that most of the existing studies in this area are focusing on explaining the products of the L2 acquisition, or the comparisons between the products of acquisition (see Section 2.7). The experimental methods adopted in those studies, accordingly, pay less attention to the contingent and dynamic learning processes as well as classroom interaction. On the contrary, the present research, inspired by SCT theoretically and methodologically, with the adoption of the genetic method, tries to recognise the learner's L2 development from both cognitive and social level. The genetic analysis documents and illuminates the unfolding of the classroom interaction, learning activities and mediation which altogether holistically bring the L2 development.

3.3.2 Microdiscourse analysis approach

The genetic method foregrounds the importance of studying the learning process in approaching the classroom interaction. In actual practice, in order to fully understand the interaction and L2 development from the SCT perspective, van Compernelle (2013, 2015) proposes a practical approach—microdiscourse analysis to analyse the classroom interaction data within SCT framework. It is 'a coherent approach to theorising and analysing the interaction in relation to L2 development that is congruent with Vygotsky's theory of mental

development', it is commensurable with the SCT principles and supports the claims about L2 development with expanded evidential basis (van Compernelle, 2015: 2).

van Compernelle (2015:21) points out that the microdiscourse analysis approach is derived from what he characterises as SCT-derived strong socio-interactionist perspective on L2 acquisition (see Ohta, 2000; Mondada and Pekarek Doehler, 2004; van Compernelle, 2010). This approach borrows the emic perspective and methodological apparatus of conversation analysis (CA) to reveal the nuances of mediational interaction in the language classroom. This does not mean that the microdiscourse analysis in SCT study is to combine SCT and CA, nor does it mean to posit CA within the sociocultural framework. Rather it means the emic perspective and nuanced scrutiny of data combine to uncover participants' actions and orientations during the dynamic interaction.

The emic perspective is to understand human behaviours as an insider (Pike, 1954, cited in van Compernelle, 2015). It requires viewing participants' interactional behaviours in situ, to understand the significance and relevance of interaction as the social practice proceeds. The emic perspective entails the nuanced analysis of the organisation, linguistic interactional features and non-linguistic resources which are integrated into mediational behaviours. The nuanced analysis is conducted through the CA-inspired analytical method.

The SCT theoretical framework underpins the explication of the learner's developmental process. Then at the analytical level, the microdiscourse analysis approach enables the researcher to observe the mediation in interaction more closely, to obtain the detailed empirical evidence to support the theoretical claims. The microdiscourse analysis aims to trace the learner's developmental processes at the micro level, as they occur from moment to moment. To be more specific, the approach aims to trace the emergence of the development, rather than tracing learner development by the 'end product'. From an SCT perspective, for the current study, this approach is a useful way to describe and decompose the mediation process, to link the mediation to the moment that the learner's internalisation occurs, to capture the developmental process 'in flight' (Vygotsky, 1978:68).

The microdiscourse analysis considers the *mediation sequence* (van Compernelle, 2013) as the unit of analysis (van Compernelle, 2015). As the approach enables the analysis of the interaction data to capture the developmental process ‘in flight’, the concept of mediation sequence is a device that makes the interaction data accessible. It is suggested that the evidence of development could be considered as the changes learners demonstrate from one mediation sequence to the next (ibid: 124) as learners progressively move towards self-regulation.

van Compernelle (2013:333) defines the *mediation sequence* as an insertion sequence when the ‘task proper’ is interrupted by difficulties, and the mediator and the learner work collaboratively to address the difficulties. He describes the sequential organisation of mediation sequence as contains four components:

- an infelicitous form in learner’s speech,
- an initiation, or opening of the mediation sequence on the part of the teacher
- a correction of the infelicitous form
- an utterance heard as a closing of the mediation sequence that signals the return to the ‘task proper’

(van Compernelle, 2013: 335)

The concept of *mediation sequence* is developed from his study of dynamic assessment of the development of L2 French learners’ sociopragmatic capacity. In that study, the interaction between the mediator and the learners are one-on-one interactive scenarios. Therefore, the identification of the components of *mediation sequence* is based on the one-on-one task. As there are more diversity of learning activities in this CFL context in the current study, for the identification of mediation sequence, the four components of mediation sequence are adapted and extended as follows:

- difficulties encountered by the learner in the ongoing learning activity
- teacher-intervention/learner-initiation
- provision of mediational assistance
- learner response/teacher evaluation as the closing

In the current research, the difficulties that the focal learner encounters are not confined to be

in language tasks, all types of difficulties in learning activities are included when identifying the mediation sequence. Since that SCT, the construct of ZPD and mediation see the learners as active agents rather than passive receivers (Verenikina, 2008), I argue that the responsibility during the mediation is not only dependent on the teachers' side, but distributed between the learners and teachers. Therefore, I adapted the second component of the mediation sequence 'an initiation, or opening of the mediation sequence on the part of the teacher' to 'teacher-intervention/learner-initiation' of the mediation. Then I adapted the third component 'a correction of the infelicitous form' to a broader concept of 'mediational assistance' to match the dataset of the CFL classroom. For the closing of the mediation sequence, taken into consideration the shared interactional responsibility between the teachers and learners, both the learner's response and teacher's follow-up evaluation are deemed as the closing of a mediation sequence.

In the current research, the adapted four components will be used to identify the mediation sequence in the CFL classroom as the unit of analysis for data analysis in Chapter 4 and Chapter 5.

3.4 Case study method

In this section, the qualitative case study designed to investigate the mediation practices in the current study will be outlined and explicated.

There exist a number of research methods in applied social sciences, each of them has the unique advantages and disadvantages. Eisenhardt (1989) points out that the case study approach concentrates on understanding the dynamic present in a single setting. Punch (2009) also suggests that the aims of case study research are to understand the case in detail, to provide an in-depth description of the complexity of the case in natural settings. Yin (2014:16) defines the case study approach as "an empirical inquiry that 1) investigates a contemporary phenomenon (the 'case') in-depth and within its real-life context, especially when 2) the boundaries between phenomenon and context may not be clearly evident". Through probing 'how' or 'why' questions (ibid), a case study entails the use of multiple

methods to develop a holistic understanding of a certain phenomenon in a natural setting (Punch, 2005).

One of the strengths of the case study approach is being strong in reality. The approach is valuable in enabling researchers to explore, report and unfold the complex and dynamic social interaction and human relationships in a unique stance (Cohen, Manion and Morrison, 2011). These features of the case study approach comply with the aims of the present study. It has been reiterated in the previous sections and chapters that the present study is posited in a CFL classroom in a UK university, which is an under-researched context from a variety of aspects. In the existing CFL research, few have been focusing on the classroom interaction. In addition, the aim of the current study is to investigate the interaction in detail through the Vygotskian genetic method, therefore, the current study is empirical, exploratory and in-depth in nature. Thus a case study approach is chosen to answer the research question, which could yield promising data for understanding the teaching and learning in a real-time context.

There are two major types of case study approach: single case study and multiple case study (Dion, 1998; Bassey, 1999; George and Bennett, 2004; Yin, 2014). Single case study approach investigates the characteristics of a unit. The unit could be an individual, a community, a school or an organisation. Five single-case rationales have been given for choosing single case study as the research design: *critical, unusual, common, revelatory or longitudinal* (Yin, 2014:51). When the researcher obtains the access to observe and analyse a phenomenon which has not been thoroughly probed in the past thus little knowledge has been gained in the area, a case could be identified as revelatory (ibid).

For the present study, while making the decision on the choice of participants, the following issues are taken into account. First, the delivery of the courses and degree programmes of Chinese studies in the UK demonstrates diversity (Zhang and Li, 2010), in addition, the limitation of the context and time pressure would not allow the researcher to collect the data from different universities across the UK. Therefore, the data is obtained from the Chinese degree programme in only one UK university, in which 20 first-year undergraduates were

registered for the programme at the moment. Second, to answer the research question, the SCT principles and the genetic method require the researcher to explore and explicate the intricacies in the provision and appropriation of the mediation within the learner's ZPD. It is difficult to trace 20 learners' appropriation of the mediation provided in the classroom as well as the impact it has on their L2 learning activities simultaneously. Hence, after careful reading of the data, the present study decides to focus on one learner's interaction with the teachers in the classroom, to trace the mediation process and its interrelation with the learner's learning activities. Under these circumstances, taking the focal learner (S1)'s learning process in the chosen module as a single case, the current study acts as an exploratory single case study to reveal the learning and teaching in this CFL classroom in British higher education context.

3.5 Research setting

3.5.1 Ethical issues

The current study is interested in the mediation process in teaching and learning in a CFL classroom in the UK. As a revelatory case study, the current research does not aim to generalise the findings to other circumstances. Hence the participant chosen for the study does not aim to represent all the learners in this CFL classroom, or the whole population of L2 Chinese learners in the UK. Among several sampling methods, the method used by this study is convenience sampling (Merriam, 1998) through personal contact. Considering the limited number of universities that offer Mandarin Chinese degree programmes (see Section 1.1 for the detailed background information about the teaching and learning of L2 Chinese in UK universities), this circumstances left limited options for the researcher. The potential university was recommended by a Chinese language teacher from another university. The data collection was conducted in the department of modern languages in the chosen university. The particular university offers degree programmes of Chinese studies and has a long history in teaching Chinese language and culture, thus has developed a systematic curriculum for Chinese language modules.

This research follows the ethical guidelines provided by Newcastle University and the ethical review was conducted and approved by Newcastle University before the data collection

started. Prior to the data collection, the researcher contacted one of the language teachers from the chosen university who was concurrently coordinating the module, gained the verbal permission to conduct the current research. A formal written ethical approval was granted from the chosen university as well.

The data collection was carried out between March and May 2015. On the first visit, the researcher first explained the aims and process of the current study to two language teachers who were teaching the group at the moment. The written Participant Information Sheet (for teachers) (see Appendix B) was presented and explained to the teachers, both teachers gave their written consent (see Appendix C) to participate in the research. In this meeting, the teachers discussed the information of the module, the learners and other relevant information with the researcher.

On the first session of the data recording, the researcher visited the class, informed the learners about the overview, aims, process and data collection methods of the current study. The researcher orally explained the study to the learners in detail. The participants' right to opt out and withdraw from the study was emphasised in the meeting. In addition, the participants, both language teachers and learners were informed about the possible influence of participating in the current study. This information was also offered to the learners on the written information sheet (see Appendix D). Learners were given chances to ask questions regarding the procedure and ethical issues of the research. At the end of the session, all participants gave the written consent (see Appendix E) to participate. In order to have a clearer understanding of the learners' linguistic backgrounds and language learning experiences, the speaker information was gathered through a simple questionnaire (see Appendix F) later during the data collection.

3.5.2 The language module

The BA degree programme of Chinese Studies involved in the present study was a four-year programme. It offered a number of modules which were relevant to different aspects of Chinese societies, such as, language, culture, history, society and media, etc. The Chinese

language module this study focuses on was the first year Chinese language module which lasted for the whole academic year. It was compulsory to undergraduates who enrolled in the degree programme of Chinese Studies, meanwhile opened to other students enrolled in relevant degree programmes of social sciences.

In actual teaching and learning, according to the design of the curriculum, no prior knowledge of Mandarin Chinese was needed for registration. The module aimed to develop language skills at the elementary level in speaking, listening, reading and writing. The course content covered the basic grammar of modern standard Chinese (Mandarin Chinese/Pu-tong-hua) and a vocabulary of 900 high-frequency lexical items. The potential learning outcomes of the module were to acquire the equivalent competence of CEF A1/A2 or New HSK¹ Level 3/Level 4 for all the learners.

3.5.3 The textbook and materials

The textbook used in this module was the second book of a series of textbooks called *Chinese in Steps* (Zhang, Li and Suen, 2012) which was specially designed for English-speaking adult learners of L2 Mandarin Chinese. It was a localised textbook series, all the authors were Chinese-speaking teachers working in UK universities and language institutions, thus the local learners' needs had been taken into consideration.

This series adopted an approach which made an effort to use learners' rich experiences in learning and aimed to integrate methods of communicative approach, contrastive analysis, and cultural awareness (ibid). The authors focused on developing the 'productive communicative competence' (ibid) of learners. In the textbook, the generic grammatical patterns stayed at the centre meanwhile listening and speaking were the core activities. Reading and writing skills were also introduced and cultivated in a systematic manner which was backed up with

¹ HSK stands for Hanyu Shuiping Kaoshi, 'Chinese Proficiency Test'. The New HSK is an international standardised exam that tests and rates Chinese language proficiency of non-native Chinese-speakers. It consists of 6 levels, namely HSK Level 1 to HSK Level 6. Level 1 is the beginner's level while Level 6 is the advanced level. The levels of New HSK are claimed by Confucius Institute Headquarters (Hanban) to correspond to the levels of CEF (Hanban, 2015).

practices designed upon relevant research findings.

Through the observation, it is found that the teachers largely relied on this textbook to teach. They tended to adapt the materials already made available in the textbook, instead of creating the materials on their own. In oral classes, the teacher sometimes handed out extra materials, most of the time pictures (e.g., Appendix G) to contextualise the language tasks she assigned to the learners. Other semiotic materials, such as Powerpoint slides, videos and recordings were seldom used in this classroom. The use of slides and recordings were not observed through the classroom observation period while the use of videos was only observed once. As language and linguistic activities are the primary mediational resources in human mental functioning (Vygotsky, 1978, 1986), in L2 classroom, the use of physical mediational resources like pictures and material objects, were also functioned and directed through the linguistic activities and classroom interaction. As a result, the analytic focus of the current research will be the linguistic activities and classroom interaction as mediation, which included the interaction involved the use of physical semiotic resources.

3.5.4 The class types and classroom teaching

The teaching of the module consisted of six types of classes: the vocabulary class, grammar lecture, reinforcement (vocabulary) class, reading and writing class, oral class and listening class. The arrangement of the class types coincided with the language skills the module aimed to develop for the learners. The learners and language teachers met for six sessions a week, with each type of class mentioned above assigned from Monday to Friday. Each session lasted for an hour.

In vocabulary classes, the teacher introduced the new vocabulary according to the vocabulary list of each lesson in the textbook. The teacher explained, modelled the meanings and use of the particular lexical items and practised the language with the learners. In grammar lectures, the learners took turns to translate the L2 sentences from Dialogue and Grammar Notes sessions of the textbook into L1 English. If a particular learner made errors in translation, the teacher then explained and explicated the grammatical issues. The turn-taking system was

pre-determined by the learners' seating, and the teaching followed a rigid translation—evaluation/correction pattern. In reinforcement classes, the main aim was to 'reinforce', to broaden and expand the learners' understanding of the new lexical items taught in the vocabulary class which scheduled as the first session of the week. The teaching usually through language practices in different scenarios and contexts created and directed by the teacher. In reading and writing classes, learners were given writing tasks, such as re-writing a dialogue as a short passage or writing a short passage according to a topic relevant to the particular lesson. Although the orientation of the class is to practise reading and writing skills, the teacher and the learners are still engaged in active interaction to discuss the linguistic knowledge. In oral classes, learners were divided into two groups and taught separately on different days with the same content. This ensured a smaller class size that guaranteed sufficient opportunities of speaking for each learner. The learners worked as small groups of 2-3, to practise the language use in different learning activities. The oral class was learner-centred, the teacher had less control over the learners. Lastly, the listening class was taught in a language lab, in which the learners did listening practices and checked the answers with the teacher.

It is worth to mention that, except grammar lectures and listening classes, namely, vocabulary classes, reinforcement classes, reading and writing classes and oral classes, were all taught by the same teacher (see next Section 3.6) in a very similar way—a student-centred, interactive way, although these classes had different pedagogical orientations and intended to cultivate different language skills for the learners. It was observed that even in reading and writing classes, learners had been given small writing tasks, but were required to discuss their work with other peers immediately when they finished the tasks. In such classes, the teacher encouraged the learners to discuss and challenge each other in the L2 orally. In vocabulary and reinforcement classes, instead of the teacher-dominated explanation, plenty of opportunities to use the L2 were created by the teacher and learners were guaranteed the time to practise their L2. This teacher centred the learners' oral competences of using the L2 in all types of classes she taught, regardless of the pedagogical orientations of some classes (e.g., reading and writing classes). Thus, during the data analysis, the analytic focus in such classes

was also the linguistic activities and classroom interaction, and how the participants work collaboratively through languages to mediate learning in various activities.

3.6 The participants

The subjects identified in this research project were the first-year undergraduates who registered in the module mentioned above and their teachers. Two language teachers involved throughout the delivery of the module. One was a native speaker of Mandarin Chinese (hereafter T1), taught vocabulary classes, reinforcement classes, reading and writing classes, oral classes and listening classes. T1 met with the learners for five 1-hour sessions per week. The other teacher (hereafter T2) was a native speaker of British English with native-like proficiency in Mandarin Chinese, who taught only grammar lectures once a week. Both teachers have been working in the field of CFL over decades and highly experienced.

Twenty first-year undergraduates enrolled in the module, consisted of eleven female and nine male. There were fifteen British, two Hungarian, one American, one Russian and one Belgian. Among them, eight learners enrolled in the degree programme of Chinese Studies, others were enrolled in other degree programmes of social sciences. According to the self-reported information gathered by the Speaker Information Sheet (see Appendix F), ten learners were monolingual speakers and had no contact with other languages except their first languages in daily life. Half of the learners in this project had no prior learning experience of Mandarin Chinese before they registered for the module.

According to the rationales given previously in Section 3.4, the current research is a single case study, focuses on the L2 learning and micro-development of one learner in this CFL classroom. The focal learner (hereafter S1) is chosen based on his classroom activity performance and the quality of the interaction between S1 and the teachers, after the scrutiny of the data. His background information will be briefly introduced here. S1 was a 20-year old first year undergraduate enrolled in the degree programme of history. Although had some contact with French at home, S1 was a monolingual British English speaker. Making reference to the information gathered through the Speaker Information Sheet, before starting

the module, S1 had four months' experience of teaching English in a Chinese city a few years ago. However, he self-reported that he had no experience of learning Chinese as a foreign language. It can be inferred that he must have had some contact or exposure to Mandarin Chinese during that four months living in China, but did not learn the language systematically in formal educational settings, such as in a school or a language institution. Thus, S1 considered himself as having no prior experience of learning Chinese as a foreign/second language.

3.7 Data collection

With the goal of investigating how learning is mediated, focuses on provision and appropriation of the mediational assistance in a CFL classroom, the present study intends to describe and scrutinise the dynamic classroom interaction between the focal L2 learner and two language teachers. The documentation of classroom discourse and the observation of the learning activities in the natural context and real-time (Yin, 2014) are the main components of the data.

According to the arrangement of the academic terms in the chosen university, the data collection was divided into two phases. The first phase lasted for two weeks in the second term of the academic year in March 2015. After the Easter break, the second phase began on 20th April 2015, lasted for another two weeks in the third term of the academic year. The first part of the data is made up of video-recordings and audio-recordings of the classroom discourse.

It is mentioned previously (see Section 3.5.4) that the target language was taught through six types of classes: the vocabulary class, grammar lecture, reinforcement class, reading and writing class, oral class and listening class. Among all the classes, the listening classes were taught in a language lab. The main activities were listening to pre-made recordings of typical listening exercises of L2 Chinese and answering questions. The teaching process involved repeated listening instead of interactive negotiation of the L2 meanings between the participants. Besides, the interaction observed between the participants in this context had

been reduced to a minimal level. Hence, bearing the aim and focus of the current study—the interaction and mediation between the participants in the classroom, the listening classes in this module had been excluded. All the other five types of classes were recorded and observed by the researcher.

All the classes except the oral classes were taught in large lecture rooms, where the learners sat in rows. In the oral classes, twenty learners were divided into two groups, taught at different times with the same contents in small seminar rooms. For the 4-week's language instruction, the researcher employed two tripod-mounted cameras and four voice recorders to make the video- and audio-recordings simultaneously. One camera was placed in the front corner of the lecture room facing the students to capture the interactions in the whole class. Another camera was set up diagonally at the back corner of the room, facing the teacher and the whiteboard. It was used mainly to capture the teachers' movement. Voice recorders were placed on the tables in the middle of each row. The rationale for this arrangement was to record the interactions between learners in small groups during the instruction, which could not be recorded clearly by the two cameras. In the oral classes, the teacher usually randomly grouped the learners into small groups of 2-3 according to their seats on the day. Each small group was given a voice recorder to record their verbal interactions. At the end of the 4-weeks' instruction across two months' time span, 24 sessions had been recorded, resulting in approximately 24 class hours' video-recordings and audio-recordings respectively of teacher-learner and learner-learner interactions.

Yin (2014) suggests that six types of resources are important to data collection in doing a case study: documents, archival records, interviews, direct observation, participant observation and physical artefacts. During the data collection, the researcher also relied on direct non-participant observation along with the field notes produced as the data to document the real-time classroom interaction. Observational notes serve as the second part of the data. The observation could lead to authentic insight about the participants and phenomenon (Merriam, 1998; Heigham and Croker, 2009), as the data obtained from observation is 'rich, round, local and specific' (Mason, 2002). The researcher was sitting on the other side of the classroom

observing the learning activities during the teaching process. The observational notes recorded what was actually happening during the classroom activities, documented the interesting features that provoked the valuable considerations from the researcher, which might vanish in seconds. The video- and audio-recordings are considered the most important types of the data, while the field notes serve a complementary function to the video- and audio-recordings, furthermore, it could be considered as the first attempt to analyse the data.

Since the presence of the cameras, voice recorders as well as the researcher, the circumstances raise the issue of ‘observer’s paradox’ (Labov, 1972). The participants—both the teachers and learners—were aware of the fact that they were being observed and recorded. As a negative influence, the participants might feel nervous and uncomfortable, then they would have behaved differently compared to their ‘normal’ performance. However, according to Duranti (1997), this negative influence is temporary, as the observation and recording proceeds, the repeated recording becomes part of the routine of the classroom activity, the participants feel less and less threatened. It is also suggested by Goodwin (1981) that the participants of an interaction tend to behave normally although they are being observed, as they organise the talk relative to their interlocutors. In order to reduce the ‘observer’s paradox’, in the current research, the first a few minutes of the data were not considered as adequate for analysis.

Interviewing is a data collection technique which is pervasively used in qualitative applied linguistic research (Merriam, 1998; Bryman, 2008). It is a natural and social way to obtain information to yield in-depth data on a variety of topics (Dörnyei, 2007). While with the methodological strengths to generate rich data, interviews have weaknesses as well. One of the weaknesses of interviews is that there is the possibility that interviewees would display him/herself in a better way than real life (Oppenheim, 1992; Dörnyei, 2007). In addition, interviewing itself is a social practice (Nunan, 1992; Dörnyei, 2007), thus interviewees enter the session with ideas of what are the socially preferred/dispreferred responses to certain issues. As a result, interviewees are ‘inevitably’ influenced by the ‘social desirability bias’ (Dörnyei, 2007: 141). That is to say, interviewees may feel the pressure to make their responses to interview questions to meet social conventions and norms, instead of giving their

true opinions which might cause social disapproval. This endangers the validity of the data collected through the interviewing technique. For instance, in Wang's (2016) study regarding the learner and teacher attitudes and perceptions towards translanguaging practices in CSL classrooms, one of the teacher interviewed claims that she is strongly against translanguaging in the classroom, and the practice should not be introduced into the CSL classroom for the sake of 'guarding' the Chinese language and culture. However, when looking at her language use in teaching, it is found that she employs translanguaging in several instances for teaching, which contradicts her own claimed perceptions and attitudes.

Additionally, it is the research question that drives the research design, not vice versa (Shavelson and Towne, 2002: 99). Interviews are believed to enable the participants to discuss their perceptions, perspectives, attitudes, experiences, knowledge and feelings about the world (Patton, 2002; Punch, 2009; Cohen, Manion and Morrison, 2011). In the context of the current case study, the research question is 'how learning is mediated in a Chinese as a foreign language classroom in a UK university'. It aims to investigate the role of assistance in L2 teaching, learning and development in the classroom. It focuses on what the participants actually do in the mediational activities which facilitate the learner's micro-development, rather than being interested in what the participants claim to know or feel about the mediation practice. Guided by the research question, it is considered that the most adequate data needed for the thick description and microanalysis to answer the specific research question would be the genuine classroom interaction and mediational activities. With this consideration as well as the potential risk of the 'social desirability bias' mentioned above, the methodological decision of not interviewing the participants has been made for this study.

3.8 Data analysis procedure

3.8.1 Participant and data selection

Followed the Vygotskian genetic method, all recorded data were extensively reviewed for several times after the data collection. At the first round of data reading, the researcher's focus was on the learners' interaction with the teachers. While iteratively reviewing the data, for 20 undergraduates, the instances of each learner's engagement in mediation processes were

counted and recorded. The aim was to identify the engaging learners who actively participated in and responded to the mediational processes. With the numbers of mediation instances for each learner obtained in this phase, three learners who were most actively engaged (with the first, second and third highest number of mediation instances) in the classroom interaction were identified.

At the second phase, the video-recordings as well as the audio-recordings, in which these three learners engaged in were carefully observed and transcribed. Bearing the research question in mind, to investigate the provision and appropriation of mediation to see how learning is mediated, the recorded and transcribed data of three learners' interaction in the classroom had been preliminarily and briefly analysed with the observational notes as the complementary data source. Based on this preliminary analysis of the data, the focal learner S1 had been chosen from the three learners as the learner participant of the current study (see Section 3.6) for more in-depth analysis.

The reason that S1 had been chosen as the focal participant of the study, is that compared to other learners, S1 was actively engaged in the classroom activities in both video-recordings and audio-recordings. Even when compared with two other active learners identified after the first round of data reading, there were more teacher-learner and learner-learner engagement and mediation instances in S1's data set. As an L2 Chinese beginner, although S1's L2 proficiency level was relatively low among the learners, S1 had extensively demonstrated the agency to engage and negotiate with other participants during four weeks' instruction.

According to the principles of the case study approach, such case in an under-researched context and area would produce rich data for the understanding of the mediation in the CFL classroom. As previously stated, in the second phase of the data analysis, all three learners' classroom interaction had been transcribed when they were identified as the most active learners in this classroom. Thus, when S1 had been chosen as the focal participant, all the interaction S1 had been involved in, and all the transcripts were then closely re-checked and reviewed with the video- and audio-recordings, as well as the observational notes to ensure the accuracy and richness of the transcripts.

3.8.2 Transcription

Transcripts are acknowledged as the presentation of the data, and the transcribing process bears significance to the research of human interactions. Researchers have suggested that there is a number of reasons for the importance of transcription for data analysis (see Jefferson, 1985, 1996, 2004; Psathas and Anderson, 1990; Seedhouse, 2004; Liddicoat, 2007; Have, 2007; Hutchby and Wooffitt, 2008; Jenks, 2011). Transcripts help researchers to ‘freeze’ the data for repetitive analysis (Have, 2007), especially that the easily neglected interactional features can be carefully examined through the transcription (see Sacks, 1984). The transcribing process involves repeated viewing and hearing of the recorded data, which contribute to the objectivity of the observation. Through this process, the data could be presented with more accuracy and careful consideration. However, it is worth noting that the transcript is the presentation of the data, not the data itself (Brandt, 2011) nor it is the neutral and objective representation of the data (Green, Franquiz and Dixon, 1997; Liddicoat, 2007). Rather it involves the transcriber’s decision and subjective opinion towards the interaction. According to different research focuses, researchers transcribe interaction in different ways and represent different details (Gumperz and Berenz, 1993; Liddicoat, 2007).

In the current study, the focal learner S1’s interaction with the other participants was listened through the software Audacity, checked with the video-recordings then transcribed according to the transcript convention adapted from Jefferson’s (2004) work. Since the nature of the classroom being a beginner L2 Chinese classroom, the transcribing involves Mandarin Chinese. Several transcript symbols representing Chinese linguistic features had been adapted and incorporated into the transcript conventions (see Appendix A for details). Aims to present the details of the classroom interaction in this particular classroom to reveal the nuanced mediational processes between the participants, the transcripts include as many details as possible. Including pauses, mispronunciations, false starts, etc., as these interactional details might be relevant to the subsequent analysis. The following Excerpt 3.1 shows an example of the transcript in this study.

Excerpt 3.1

19 S1: ((looking down at the textbook))ehm:(2.0)eh:
20 T1: wo you che ni mei you che(.) so↑
 {I have car you N2 have car}
 {I have (a)car (and)you don't have car}
21 (2.6)

On the translation of the data in Chinese, this study adopted the three-line layout suggested by Gumperz and Berenz (1993). It can be seen from the example, in line 20, the first line of the transcription is the original Chinese utterances documented in its original pinyin² form. The second line shows the translation from Chinese into English in a word-to-word fashion, while the third line gives the free gloss and translation in English as a meaningful sentence. The rationale of providing the word-to-word translation is that Mandarin Chinese is typologically different with English in many aspects including grammar and sentence structures. Under such circumstances, while the mediational focus of learning is a certain linguistic or grammatical item, to which there is no accurate English equivalent, the word-to-word translation could give a clearer focus for readers to locate the trouble source of the learning and interaction in the transcripts.

3.8.3 Data analysis procedure

To investigate how learning is mediated through the provision and appropriation of the mediational assistance in this CFL classroom, the transcribed data were analysed within the theoretical framework of SCT, guided by the concept of ZPD with the microdiscourse analysis approach. Follows the approach proposed by van Compernelle (2013, 2015), the mediation sequence is deemed as the unit of analysis for the current study.

After S1's classroom interaction across four weeks' instruction was transcribed, first the

² The standardised Romanised phonetic alphabet of Chinese, it was developed and adopted in the 1950s in Mainland China.

instances that S1 encountered difficulties, and was not able to complete the problem-solving independently were identified as the learner's ZPDs. Subsequently, within the learner's ZPDs, according to the adapted components of mediation sequence (see Section 3.3.2), through repeated reading and re-reading of the data, the mediation sequences were identified in different kinds of classroom learning activities. These mediation sequences were then grouped in line with the nature of the activity. For example, the mediation sequences that emerged in the language and interactional tasks were identified as the category of scaffolding, while the mediation sequences emerged from the other types of classroom activities were identified as other categories.

van Compernelle (2015) categories two types of mediation sequences: self-initiated and other-initiated mediation sequences. While analysing the data, the researcher also paid attention to these two types of mediation initiations. As Vygotsky's genetic method focuses on the learning process, the analysis of the mediation sequences uncovers how the mediation was carried out in the contingent interactions and how the learner responded to these mediation made available in the sequences. Ultimately, the microgenetic analysis of mediation sequences allowed the researcher to conceptualise how S1's learning activities were progressively mediated and developed in this particular classroom within a short period of time.

3.9 Reliability, validity, generalisability and reflexivity

For the case study approach, the objective of reliability is to ensure that the later research could follow the same procedures to conduct the same case study and obtain the same findings and conclusions (Yin, 2014). For qualitative case studies, especially the revelatory single case study as the current one, the issue of reliability and validity can be complicated. The research should be presented with the transparency to the analytical claims made in the research (Nikander, 2008) to make it possible for other researchers to make checks and judgement (Potter and Edwards, 2001) to validate the research findings. Therefore, in this study, while the microdiscourse analysis method is inspired by CA, such transparency to ensure the reliability is supported by the quality of recordings and the quality of transcripts

(Perakyla, 2004; Seedhouse, 2005).

During the data collection, two cameras recorded the classroom interaction from different angles (see Section 3.7), and four voice-recorders placed for group interactions generated high-quality data. The recorded data in this way is credible for the analysis. The quality of the transcripts also contributes to the validity and reliability of the research. The transcripts should be the accurate representations of the interaction. However, at the practical level, it is impossible to document every detail in the interaction. Through the multiple readings of the transcripts and the comparison between the transcripts, the video- and audio-recorded data, and the observational notes, the researcher made an effort to ensure the accuracy of the transcripts. Other PhD students and Mandarin Chinese speakers had been invited to check the transcripts to improve its accuracy for the analysis. Two Mandarin-speaking PhD colleagues from Newcastle University who were familiar with the transcribing approach were invited to cross-check all S1-involved transcripts with the video- and audio-recordings. The data and transcripts with quality allow other researchers in the field to check the credibility and validity of the research findings and claims with the detailed analysis presented by the researcher.

Morse and Richards (2002) warn that an important issue in qualitative studies is that the qualitative researcher is the instrument, the quality of the research and his/her skills and interpretations are vital components to the validity and reliability of the qualitative research. Maxwell (1992) proposes to use ‘investigator triangulation’, which is to use multiple investigators, to collect and interpret data to guarantee the descriptive validity of a qualitative study. As a qualitative researcher, in order to ensure the validity and reliability of this study, and to address the limitation of being over-subjective towards the interpretation of the findings, peer-checking (Dörnyei, 2007) had been adopted. The analysis and interpretations of the data for this particular SCT study had been presented and discussed with peer PhD researchers and experts in the field in several conferences and data sessions in research groups, for instance, the graduate conferences in several UK universities and the annual conference of British Association for Applied Linguistics during the whole PhD process. The critical discussions from those occasions contributed to the intersubjective scrutiny (Have,

2002) and the overall objectivity of the data analysis process, especially when disagreements emerged.

In Section 3.4, several advantages of the case study method had been listed, however, there also exists criticism against this method. A major criticism is that the approach is not able to generalise the findings of a certain case to other circumstances (Thomas, 2011). A case study is seen to serve an exemplary function (ibid). According to Merriam (1998), the validity and reliability of case studies lie on the generation of ‘new’ theories from the research findings. Yin (2014) argues that the findings discovered in a single case, empirically enhance the theory or theoretical propositions used in the very case study. In the present study, the CFL classroom is far from well-researched, and the incorporation of the sociocultural perspective is still rare in this particular research area. The conclusions and findings drawn from the present research would not provide a generalising theory for the teaching and learning of the L2 in CFL classrooms in the UK. However, it provides preliminary empirical analysis and evidence to contribute to the sociocultural research of L2 classroom interaction, broadens the understandings for CFL classrooms in the UK.

As van Lier (2005) and Duff (2008a) suggest, although the generalisation can not be made from case studies, this research design is sufficient to offer a vantage view to explore complex, intricate phenomena meanwhile to trace the change over time. In this sense, the current research provides access, for other researchers in the same field to find the resonance in their practice (Flybjerg, 2006; Foreman-Peck and Winch, 2010), thus shed some light for other empirical research in future.

Conducting research affect its researcher in many aspects, especially in qualitative research. Through the process of reflexivity, these changes brought by the research process could be acknowledged, moreover, how these changes affect and shape the analysis and research findings will be more explicit (Palaganas *et al.*, 2017). Reflexivity entails self-awareness (Lambert, Jomeen and McSherry, 2010) and introspection on the role and value of the researcher (Parahoo, 2006). The constant reflexivity helps to recognise, examine and

understand how a researcher's social background, location and assumptions affect the particular research (Hesse-Biber, 2007:17). Mauthner and Doucet (2003) write that the academic and personal biographies, institutional and interpersonal contexts contribute to a researcher's reflexive behaviours and actions, especially during data analysis. For this SCT case study, as the researcher, I reflexively introspect how my own academic and personal traits, including my cultural and linguistic background, impact and affect the interpretation and analysis of the classroom interaction data.

As an L2 language learner and user of several languages, I personally have the learning experiences, beliefs and perceptions about what looks like to learn a particular language in a foreign language context. These experiences provide me with the profound empirical understanding as an L2 learner. I understand the expectations, difficulties and obstacles an L2 learner may encounter during learning. In addition to the experiences of being an L2 learner/user, I have been receiving extensive academic training as a postgraduate and researcher in linguistics and applied linguistics, and also as a pre-service L2 Chinese teacher in the past years. The academic training has equipped me with the ontological, epistemological, theoretical, methodological knowledge of the research field that I constantly study.

The previous experiences of studying in an L2 Chinese teacher training programme and being a CSL teacher, guarantee me the practical knowledge in teaching and learning of Mandarin Chinese. This practical knowledge familiarises me with the beliefs and perceptions towards several issues that exist in L2 classroom teaching and learning contexts, such as effective ways of asking questions, functions of teacher wait time and use of L1 in L2 classroom. Through these experiences, I have gained part of the shared knowledge as an 'insider' of classroom teaching and learning practices with the participants in this research.

Being an ethnic Chinese and Mandarin Chinese speaker, linguistically and culturally, I am an insider of the Chinese community, which guarantees me the 'mastery of natural language' (Garfinkel and Sacks, 1970:342) that enables me to access the common sense and practical

knowledge about Chinese language and cultural elements that involved in the everyday teaching in the particular context. However, I do not have the teaching and learning experiences in British higher education as an undergraduate. In this sense, I am an ‘outsider’ to the modern language classrooms in British higher education, especially the particular classroom culture of this CFL classroom that I observed.

These varied experiences and contexts have impacted the observation and data interpretation during the research process. As the researcher, I bear the shifting dual role (Råheim *et al.*, 2016) of both ‘insider’ and ‘outsider’ (Garfinkel, 1984; Emerson and Pollner, 1988; Lynch and Woolgar, 1988; Pollner and Emerson, 2001) to the research context and data. As an insider, my academic training and research have made me knowledgeable to the ontology, epistemology, theory and methodology related to the research context and topic. The membership knowledge (Garfinkel, 1967; Have, 2002) contribute to the sense-making of the meanings and behaviours generated by the participants in classroom observation, data analysis, and interpretation.

On the one hand, the observational notes were influenced by the understanding of the classroom phenomena based on the membership knowledge as an insider; the theoretical and practical knowledge guided the selection of participants and data, also the membership knowledge help the constant reviews and reflections of the theory and methodology while analysing the data. The cultural and linguistic knowledge as a Mandarin Chinese speakers and L2 Chinese teacher also contribute to the interpretation of the linguistic knowledge under the discussion of the participants as well as the learning and teaching methods employed by them. Through the researcher’s membership knowledge as a resource in data analysis (Have, 2002), the activities and practices these participants engaged in were recognised and studied from within (Lave and Wenger, 1991).

On the other hand, being an outsider to this particular classroom and the participants, requires me as the researcher to respect and treat the participants as the experts in a variety of activities, to trust and build the rapport with them. Especially to the teachers, as most of the

time during the observation, they were the providers of the classroom mediation. Their professional and expert knowledge to the teaching practices were recognised, trusted and appreciated through the observation to the analysis of the data. This perspective towards the participants and data was also in line with the emic perspective demanded by the microdiscourse analysis approach (see Section 3.3.2) employed by the current research.

3.10 Summary

In this chapter, first the SCT methodology—the genetic method, case study approach, and microdiscourse analysis for data treatment at the micro level are explained. The rationale of the combination of these methodological choices is also explicated. Second, the research design and the data collection procedure, as well as the issues regarding the transcription are also explained. The following chapters will present the detailed analysis of the mediation in classroom interaction, along with the focal learner’s appropriation of the assistance provided in the classroom activities.

Chapter 4. The mediation and mediational resources in classroom interaction

4.1 Introduction

This chapter reports the results of the microgenetic analysis of the classroom interaction between the focal learner S1 and two language teachers. The analysis seeks to answer the research question of how the mediation is processed between the focal learner S1 and the teachers in this particular CFL context. The empirical evidence will show how the teachers provide mediation and how the focal learner S1 appropriates the mediation to facilitate learning activities.

Section 4.2 focuses on the social practices of classroom teaching. The data demonstrates how scaffolding (Wood, Bruner and Ross, 1976) and co-regulation (Lantolf and Thorne, 2006) as interactional mechanisms and resources to mediate and promote S1's L2 learning. Section 4.3 adopts the ecological view to L2 teaching and learning (van Lier, 2000) through the construct of 'affordance' to investigate how the mediation is carried out in form-focused language activities. Section 4.4 turns to the use and functions of the L1 in this L2 classroom. Section 4.5, regarding the mediated nature of human interaction, treats teacher gestures which align with speech as sociocultural artefacts and semiotic resources to mediate S1's language learning.

4.2 Mediational practices in the ZPD

In this section, the focus will be put on instructional interaction between the language teachers, more capable peers, and S1. Through explicating the mediational resources used in scaffolding and co-regulation practices, the microgenetic analysis reveals the dynamic mediational process.

4.2.1 Scaffolding in task-oriented L2 classroom activities

According to Wood et al.'s (1976) seminal framework, scaffolding refers to the supports the teacher provides for the learner in order to carry out a task. Wood et al.'s (1976:98) framework categorises six features of teachers' scaffolding:

1. Recruitment of interest to the task
2. Simplifying the task and reducing the degree of freedom
3. Maintaining pursuit of the goal
4. Marking critical features and/or discrepancies between the correct production and what has been produced by the learner
5. Frustration control
6. Demonstrating and modelling the ideal solution

From the definition and features mentioned above, it is clearly indicated that scaffolding is task-oriented. Compared to other notions which focus on the understanding of assistance and help provided by teachers and peer learners in the classroom, such as ‘guided participation’ (Rogoff, 1990) and ‘assisted performance’ (Tharp and Gallimore, 1988; Gallimore and Tharp, 1990), scaffolding is more concerned with the specific task (Alsowayegh, 2015). Thus while scrutinising and analysing the scaffolding instances during the classroom interaction, the present study focuses on the teacher-learner interactional episodes which have a clear task orientation. The mediation sequences categorised as scaffolding are all aim to assist the learner to complete specific tasks or sub-tasks. The scaffolding features proposed by Wood et al. (1976) are used to identify and explain the scaffolding mediation sequences.

Excerpt series 4.1 is taken from the classroom interaction in the oral class of Week 1. The particular task for S1, is to report the collective L2 work from the pair work with the peer learner S2. In the pair work, they work collaboratively to create a story according to a picture (provided by T1 as extra material, see Appendix G), describing the figures in the picture of ‘what are they doing’. The learners are encouraged to incorporate the newly introduced linguistic forms in their story. In Excerpt 4.1.1, S1 has been requested to report their group work. T1 explains the guidelines and instructions of the task before S1 starts reporting their collective work.

Excerpt 4.1.1 (oral class, Day 5, Week 1)

- 1 T1: S1(.) qing ni shuo: nimen(.) de gushi your story
{please you speak: you(p) POS story}
{please tell (us) your story}
- 2 S1: eh(1.9) eh:(0.8) ehm(0.6) yeye(.) nainai
{grandpa (.) grandma}
- 3 T1: ah ni yao xian jieshao introduce the:(...) family
{you need first introduce}
{first you need to introduce}
- 4 S1: ehm:
- 5 T1: you have to ()background↑ yeah↑ introduction↑ and
then
- 6 (3.5)

In lines 1 and 3, T1 code-switches between the learner's L1 and the L2 to give guidelines for the sequence of task completion. She delivers the speech with elongated vowels (shuo:) and prosodic stresses to highlight the core phrases and meanings in the description of the task for S1. In line 5, T1 supplies more information about the task in L1, explicitly reminds S1 to give background information first in his report. T1's interactional moves in lines 1, 3 and 5, combines L1, L2 and prosodic resources such as stress and intonation, recruit S1's interests to the task, maintain the pursuit of the task goal, give clear instruction for task completion. She swiftly scaffolds and mediates S1's understanding of the task in general. In addition, her use of language not only gives clear instruction for completion of the task, but it also creates opportunities for incidental learning (Wode, 1999; van Compernelle, 2010a) as T1 incorporates as many L2 linguistic elements as possible in the task guidelines. S1 starts forming an L2 sentence in line 2, his utterance involves long pauses, and T1 gives more guidelines before he could finish the utterance. With elaborated task guidelines, S1 responds with hesitation (line 4) and long silence (line 6). His behaviours signal his difficulties in completing the task. In the next excerpt, after the 3.5-second pause, S1 re-starts summarising their L2 pair work.

Excerpt 4.1.2 (oral class, Day 5, Week 1)

7 S1: hoo: eh(1.7) ((holding the paper in his left hand, and
8 pointing at the figures with his right hand))
9 zhe shi(.) yi ge(.) jia (1.7)*³
{this Be one M family/home/house}
{this is a family*}

10 ah:=((circling his hands in the air, with facial

11



expression))

12 T1: =shei de jia ↓
{=who POS family/home}
{=whose home?}

13 (1.5)

14 S1: ah:(.)ta de((pointing at S2))(.)jia
{she POS home}
{her home }

15 T1: hao ((slightly nodding))
{okay}

16 SS: (...) ((laughter))

17 T1: zhe shi S2 de jia and then↑
{this be S2 POS home}
{this is S2's home}

18 [((T1 walks towards S1, holds the paper in her hands))]

19 SS: [((laughter))]

³ The noun 'jia' in Mandarin usually indicates the house which the family lives, the appropriate noun here should be 'jiating' which indicates the family members as a whole.

20 S1: [()](to S2)
 21 T1: tamen shi shei [tamen shi shei]
 {they be who they be who}
 {who are they? who are they?}
 22 SS: [()]
 23 S1: that's exactly what I was thinking
 24 SS: ()
 25 T1: tamen shi shei↑
 {they be who↑}
 {who are they?}
 26 S1: ehm:(...)((to S2))whom would you like to be
 27 S2: I don't mind

S1's deep breath along with the 1.7-second pause (line 7) indicates nervousness and that the task is cognitively challenging in nature for him, although he has been practising collaboratively with S2 in their pair work. His L2 attempt in line 9 is acceptable but not grammatically correct. In lines 10-11, the circling gesture and confused facial expression show that he is in a word search but encounters difficulties. All these form the evidence that the current task is beyond his L2 ability thus invite mediational actions from the teacher. T1 has immediately detected the gap. By a latching speech followed in line 12, she interrupts S1's hesitation, asks a probing question (Cazden, 1983) (=shei de jia↓) to provide S1 with a starting point for his L2 description.

From a point view of scaffolding, the teacher's move simplifies the complexity and difficulty of the current language task. Moreover, through simplifying the complexity and difficulty of the task, the move also makes the learner feel less frustrated (Donato, 1994; Wood et al., 1976), and it provides a possibility for S1 to complete the task step by step.

After a 1.5-second pause, S1 answers the probing question then starts treating the task as describing the family life of someone he is familiar with, which largely makes the task less

complicated and more context-sensitive. T1 gives the feedback in line 15 with the Chinese acceptance marker ‘hao (good/all right/ok)’ as the acknowledgement token to encourage the learner to expand his description. In the subsequent interaction, without the learner’s follow-up contribution, T1 recasts S1’s previous utterance, follows the prompt with a rising intonation (line 17 *and then↑*). Her prompt and request for elaboration recruit S1’s interest to re-focus on the task. The action here does not successfully elicit S1’s response, which leads to further assistance. While S1 is distracted from the task and engages with S2, in line 21, T1 repeats the probing question (*tamen shi shei [tamen shi shei]*) twice, in order to re-direct the learners’ attention to the task, which maintains the direction of S1’s behaviour.

The two scaffolding actions in a row fail to attract learner attention and elicit no desired response from S1 (lines 19 to 23). As a result, T1 reformulates the previous question in the subsequent line 25 (*tamen shi shei↑*), but with prosodic stress on ‘shei’ (who/whom) combines a rising intonation. The prosodic emphasis highlights the focus, gives the learner a cue and moreover, marks the task goal. Although S1 does not provide a desired L2 contribution at the end of this excerpt, by asking S2 ‘whom would you like to be’, S1 displays the intention of formulating an answer for T1’s previous probing question. By now, T1 has re-directed S1’s attention back to the language task as well as to the pedagogic goal.

In this particular excerpt, the classroom interaction shows how T1 contingently changes the ways of scaffolding according to the learner’s changing classroom performance. Considering S1’s L2 proficiency, T1 strategically employs both L2 and L1 English as linguistic resources to explain and instruct S1 to understand the current task. When S1 displays difficulties in producing the desired L2 utterance, T1 immediately discovers the trouble source then provides assistance through recasts, probing questions and prompts, she simplifies the task for the learner. When the learners are not focusing on the task and the pedagogical goal, by recasts, reformulation and the use of prosodic features in the utterances, T1 has successfully re-directed S1’s attention and pushed S1 to complete the task.

At the end of Excerpt 4.1.2, with T1’s scaffolding, S1’s focus has been re-directed to the task,

he tries to complete the task by asking S2 a question. T1 immediately interrupts him and gives more guidance in the following interaction, which is documented by Excerpt 4.1.3.

Excerpt 4.1.3 (oral class, Day 5, Week 1)

- 28 T1: S1 ↑
- 29 S1: () ((in L1 English))
- 30 T1: S1 ↑ qing ni shuo
{please you speak}
{please speak}
- 31 S1: ehm(.) ehm(.) ni xihuan(.) ehm
{you like }
- 32 S2: ° () °
- 33 S1: ehm:
- 34 T1: S1 ↑ qing ni shuo yeah ↑ ni bu wen ta qing ni shuo
{please you speak you N1 ask she please you speak}
{speak please, you don't (need to) ask her, speak please}
- 35 S1: ehm(...) ta shi S2(.) ta xihuan(.) ehm(...) kanshu
{she be she like reading}
{she is S2, she likes reading}

As S1 is still in an L1 discussion with S2, by directly interrupting and requiring S1 to continue completing the task (lines 28 and 30), T1's utterance again re-directs S1's attention back on track, meanwhile maintains the direction. In line 31, S1 focuses back to the task after

several attempts of re-direction from T1, begins to produce an L2 sentence directed to S2 (ni xihuan(.)ehm) which receives a response from S2 (line 32). T1 then intervenes in their interaction to explain the task again with stresses in her speech to emphasise the nature of the task: to summarise rather than presenting the L2 product in the form of a dialogue (line 34). T1's L2 classroom management utterances explicate the ways of completing the task at hand, maintains the direction of task goal for S1. As a result, S1 reformulates his sentence to be a statement about S2's hobby. Through the scaffolding provided by T1 in this short episode, T1 successfully keeps S1's attention on the task. The assistance is always goal-directed, which has been picked up by S1 to complete the task as T1 directs.

The series of Excerpt 4.1 is a good example of how the features of scaffolding are embodied in specific classroom interaction. Through the interaction, T1 recruits S1's interest in the learning task, maintains the pursuit of the goal while the learners are distracted from the activity, keeps S1 to be motivated towards the completion of the task at the moment. The task in this series, is meaning-focused, aims to elicit meaningful L2 utterances from the learner rather than focusing on the grammatical correctness of learner utterances. The assistance helps the learner to focus on the activity rather than correcting the learner's grammatically problematic utterance (Excerpt 4.1.1, line 9).

The next series of excerpts present another example of the functioning of scaffolding features in this CFL classroom in Week 4 of the data collection. This class session focuses on the translation exercise in the coming written exam. In contrast to the task in the Excerpt series 4.1, the task in this discussion is form-focused: to translate the L2 sentence 'ni zai nage yinhang huan waibi? (In which bank you change the foreign currency?).

Excerpt 4.2.1 (translation exercise, Day 19, Week 4)

1 T1: eh xia yi ge whi↑ch(...) eh which ban↑k did you change

{next one M}

{the next one}

2 your foreign↑ currency↑

3 (1.2)

4 ehm: S1↑

5 S1: ehm I don't know much the vocab of this I'm

6 sorry((looking at the textbook))

7 (0.8)

8 T1: chan↑ge(.)curren↑ foreign currency↑

9 S1: ehm

10 T1: change money↑

11 S1: ehm(2.3)I'm looking at this(0.7)I don't

12 know((looking at the textbook))

First, T1 has read out the target sentence in L1 English for the whole class, then waits for the learners to self-select to complete the task. After 1.2-second wait time, she allocates the turn to S1 (line 4). But S1 explicitly expresses that he does not know the L2 vocabulary involved in the sentence and makes reference to the textbook immediately. In line 8, T1 draws S1's attention to the phrase 'change foreign currency' by repeating it with several rising intonations, by which changes the task of translating a whole sentence to a simpler task of translating a verb phrase. T1's behaviour decreases the difficulty thus simplifies the current task, meanwhile marks the core vocabulary involves in the task, as a result, controls the level of frustration for S1. However, the simplification of the task does not elicit the expected response from the learner. In her next move, T1 changes the lexical choice of the L1 prompt from 'foreign currency', which seems beyond the learner's current L2 proficiency, to a more familiar noun 'money' (line 10). This change of the lexical choice simplifies the task on the basis of the previous scaffolding provided in line 8. However, after the 2.3-second pause, S1

repeatedly claims that he does not know the relevant L2 forms and refers to the textbook for help again.

S1's utterances (lines 5, 11 and 12) and actions of referring to the textbook as well as the pauses throughout the interaction, all indicate that the L2 ability required by the task is beyond his current L2 ZPD. Although T1 simplifies the task, her attempts have not been sufficient at the moment. In the following interaction, T1 changes her strategies and interactional moves to help S1 producing the expected L2 forms.

Excerpt 4.2.2 (translation exercise, Day 19, Week 4)

- 13 T1: <huan waihui huan:>((slightly rise up
the left hand))
{change foreign currency change}
- 14 S1: huan
{change}
- 15 (1.4)
- 16 T1: wai:
{foreign}
- 17 S?: waibi↑
{foreign currency}
- 18 T1: waibi ok↑
{foreign currency}
- 19 S1: huan waibi
{change foreign currency}
- 20 T1: bi shi currency↑ waihui(1.0) °um hum°
{currency is foreign currency }
- 21 (1.5)
- 22 S1: ehm
- 23 (3.6)

With the two failed attempts in the previous interaction, in line 13, T1 directly models the correct L2 forms of the verb phrase ‘change foreign currency/money’ with prosodic stresses at a slower tempo. She elongates the verb ‘huan (to change)’ as a designedly incomplete utterance (DIU) (Koshik, 2002) after the modelling to hint S1 to pick up the modelling. Her utterance is accompanied with a hand gesture which also aims to elicit a response from S1. S1 imitates the pronunciation of the verb but does not continue as the 1.4-second wait time suggests that his knowledge gap is the L2 noun ‘waihui (foreign currency)’. T1 models the pronunciation of the first morpheme ‘wai (foreign)’ in the noun ‘waibi (foreign currency)’ with elongation, emphasises and marks the critical linguistic feature. Another learner picks up the prompt and completes the phrase ‘waibi’ with a rising intonation (line 17) to invites clarification from the teacher. T1 recasts the learner’s contribution with ‘bi’ accentuated as the confirmation of the correctness. In the next turn, S1 imitates the teacher and peer learner’s L2 utterances. Then T1 explains the meaning of ‘bi’ with the L1 English equivalent, to which follows the modelling of the noun ‘waihui’ again (line 20).

In this excerpt, T1 focuses on modelling the correct pronunciation and forms of the trouble source for the learner through the use of paralinguistic means such as prosodic stresses, intonations as well as the non-verbal means of hand gestures, to explain, explicate and clarify the form of the target verb phrase ‘huan waibi/waihui (change foreign currency)’. The scaffolding features elucidated are modelling the ideal version (lines 13, 16, 18 and 20), the modelling utterances also mark the critical features and discrepancies of the knowledge for the learner. In the end, S1 imitates the verb phrase ‘huan waibi/waihui (change foreign currency)’ which is the trouble source for his L2 problem. However, he does not show the attempt to complete the original task, and the 3.6-second pause is also the evidence of his struggle. Thus in the next excerpt, T1 pushes S1 to complete the original task of translating the whole sentence: ‘in which bank you change the foreign currency?’

Excerpt 4.2.3 (translation exercise, Day 19, Week 4)

24 S1: ehm:n[i: ni]

{you you }

25 T1: [if we got] place normally <place ehm before↑
26 [the] main> °actions°
27 S1: [so]
28 S1: zai(.)na ge(.)yinhang((looking at T1))
{EXT which M bank }
{in which bank}
29 (0.8)
30 S1: [ehm]
31 T1: [ni] zai:((leaning towards and looking at S1))
{you EXT}
{you're in/at...}
32 S1: ni ni zai(.)na ge yinhang
{you you EXT which M bank}
{which bank are you in?}
33 T1: eh
34 S1: ehm(1.7)huan(0.8) °*ye*bi°
{change foreign currency}
35 T1: waibi
{foreign currency}
36 S1: waibi
{foreign currency}
37 T1: wai shi waiguo foreign country↑
{foreign is foreign country }
38 S1: oh yes of [course oh yeah yeah]
39 T1: [bi (...)] currency] waibi
{currency foreign currency}
40 S1: waibi ok
{foreign currency}
41 T1: ni zai↑ na ge yinhang huan:(.) waibi
{you EXT which M bank change foreign currency}

{in which bank you change the foreign currency}

After the long pauses, in line 24, the ‘*ehm:*’ and ‘*ni:*’ both are elongated, suggest that S1 is in hesitation or in a word search. T1 overlaps his utterance to get the floor to give a metalinguistic explanation about the position of the locative phrase in the sentence. T1’s explanation marks the critical feature of the target form and L2 knowledge involved. The scaffolding is successful as S1 starts the sentence with the existential marker ‘*zai*’⁴ and the locative phrase ‘*na ge yinhang (which bank)*’ (line 28). When he makes eye contact with T1, this non-verbal behaviour suggests a need for confirmation and assistance from the teacher. T1 elongates the existential marker ‘*zai*’ with a leaning posture towards S1 to encourage and elicit from the learner. As a result, S1 has re-started the sentence with the locative phrase ‘*zai na ge yinhang (in which bank)*’. In line 34, there is a 1.7-second long pause after ‘*ehm*’ and 0.8-second pause after ‘*huan*’. Although S1 has finished the sentence, the L2 noun ‘*waibi (foreign currency)*’ has been mispronounced with a lower volume. The pauses and mispronunciation both indicate that S1 is still unconfident in producing the L2 sentence. He has not appropriated the knowledge to solve the existing problem of ‘*waibi/wai hui (foreign currency)*’ to which T1 has assisted in different ways in previous interaction.

Through line 35 to line 39, T1 has modelled the pronunciation and explained the meaning of the noun with both L2 and L1 equivalents for each of the morphemes in the noun (lines 37, 39), which aims to help learners to understand the meaning more easily. The repeated ‘*yeah yeah*’ in line 38 shows S1’s changed understanding. T1’s explanation has successfully helped him to improve his L2 understanding. Through the interaction, T1 marks the sentence order which involves the location phrase, and models the pronunciation of the noun ‘*waibi/waihui*’ several times. S1 imitates the modelling utterances for his appropriation of the word (lines 36, 38, 40). In line 41, to summarise, T1 models the whole sentence with the verb ‘*huan (to change)*’ emphasised with elongation.

⁴ The pattern of the existential marker ‘*zai*’ is ‘*zai + location*’, the whole structure usually holds the sentence-initial position.

From the scaffolding perspective, from Excerpt 4.2.1 to Excerpt 4.2.3, T1's scaffolding marks the critical features of the target L2 knowledge and forms, emphasises the key phrases for S1's specific linguistic problems. There are several instances that T1 models the correct and ideal version of the L2 forms for the learner, to which S1 imitates for further appropriation. Although S1 has not provided a full and smooth L2 sentence as the task demands, it is still evident in the interaction that T1's scaffolding attributes to S1's changing understanding and performance.

4.2.2 Co-regulation between the teacher and learner to maintain intersubjectivity

Understanding the intentions and meanings of participants is the basic mechanism of interaction. SCT holds a dialogic perspective on interaction, which considers one participant's behaviours and actions to be dependent on regulation from other interlocutors. SCT has described this dialectical phenomenon as co-regulation (Vygotsky, 1978, 1987; Michell and Sharpe, 2005; Lantolf and Thorne, 2006; van Compernelle, 2015). In the language classroom, on the one hand, language teachers regulate learners through guidance, assistance, and correction provided during the learning process; on the other hand, learners also regulate language teachers' behaviours and choices through their classroom performance, for example, silences, hesitations and so on (van Compernelle, 2015). Through the co-regulation process, teachers and learners establish the intersubjectivity which leads to mutual understanding of the linguistic and interactional knowledge in the context. Furthermore, co-regulation benefits the ultimate goal of L2 development.

In this section, the interaction between the language teachers and S1 will be examined to reveal how co-regulation process is functioning in the classroom as a useful resource and premise to construct and benefit the learner's learning experiences and L2 development.

The first example provided is extracted from the reinforcement class in Week 3. Before the interaction in Excerpt 4.3.1 starts, the learners and T1 are negotiating the meanings and differences of the perfective aspect marker 'le' and the experiential aspect marker 'guo' (Li and Thompson, 1981) which usually are the focus and difficulties in elementary Mandarin

Chinese courses. T1 has described the different situations which are suitable for ‘le’ and ‘guo’ respectively. Moreover, she provides example sentences which model the appropriate use of two aspect markers. The teaching lasts around 3 minutes, then S1 engages in the group discussion with the other three learners, tries to elaborate on the subtle differences between these aspect markers. However, the learners are still confused about their differences and grammatical meanings, as both of these markers refer to actions in the past. As a result, in lines 1 to 4, T1 starts a new episode of explanation elaborating their grammatical meanings as well as the subtle differences.

Excerpt 4.3.1 (reinforcement class, Day 13, Week 3)

1 T1: xue guo yi nian ehm ni ye keyi shuo xue le
 {study EXP one year you also can say study PER}
 2 yi nian but xue guo yi nian so that's that time
 {one year study EXP one year }
 3 experience↓ yeah↑ ((to S2))((pointing her right palm
 4 to the far side))



{had studied for a year, you can also say 'studied for a year', but 'had studied for a year'}

5 S1: so wo(.)wo xue guo(.) yi nian
 {I I study EXP one year}
 {I had studied for one year }
 6 T1: ((nodding))
 7 S1: I I studied for a year
 8 T1: ((nodding))
 9 S1: and that [doesn't]

10 T1: [that's] before((gesture))you came to(city
name)=

11 S1: =before you came to (city) but that doesn't imply
12 anything about whether you(.) have finished that or
13 continuing that in the future
14 (0.6)

15 T1: NO↑ xue guo yi nian that's ehm
{study EXP one year }
{had studied for a year}

16 fi↑ni↑shed ((repeat the same gesture as in line 10))

17 S1: that's finished

18 S2: cuz it's before=

19 T1: =yeah↑ he has done Chinese for a year in the past

20 S1: ok

21 S3: you don't care about whether you're doing at (city)
22 you just asking about [whether ()]

23 S1: [oh:I see]okay

24 T1 how long (...)you did Chinese(.)before you came
to(city)↑

25 S1: ok I see
26 (...)

27 T1: wo ye keyi shuo ni xue le duochang shijian keyi
{I also can say you study PER how long tme can}
{I can also say 'how long did you study', it's ok}

28 S1: yeah

29 T1: I can say that how long did you study

30 S1: ok



T1 first has elaborated on the similarities and differences between the two aspect markers under discussion (xue guo yi nian ehm ni ye keyi shuo xue le yi nian, lines 1 to 2) that they can be used interchangeably in some circumstances but ‘guo’ focuses more on conveying the concept of experiences in the past (lines 2-3). She embeds the L1 English conjunction ‘but’ in the explanation to mark the differences. T1’s monologue ends with a discourse marker with rising intonation (‘yeah↑’) to check the learners’ understanding. In line 5, starting the turn with the discourse marker ‘so’, S1 continues the discussion initiated by T1, tries to summarise T1’s explanation. From lines 5-13, S1 first repeats the sentence ‘so wo(.)wo xue guo(.) yi nian (I had studied for a year)’ and translates it into English (line 7) which is confirmed by T1 with nodding (line 6, 8). S1 intends to elaborate and clarify his own understanding of the grammatical meaning of the sentence, but he is interrupted by T1’s overlapped speech. T1 holds the floor and continues to explain. Her explanation is latched with S1’s speech in line 11, which indicates that the information provided in line 10 by T1 is already known to S1 as the same L1 translation explanation has been demonstrated several times in the teaching in the past a few minutes. By this latched speech, S1 gets the floor from the teacher to express his own understanding of the sentence, meanwhile asks for clarification (lines 11-13).

After a short pause (line 14) T1 gives feedback by a stressed and louder ‘NO↑’ with rising intonation which signals the discrepancy in S1’s understanding. With the English explanation (line 16) and peer learners’ assistance (lines 18, 21, 22), S1 verbally accepts the assistance and explanation. His changing understanding is evident in the overlapped and elongated speech ‘[oh:I see]okay’ in line 23. In the subsequent line, T1 reformulates the English meanings of the sentence under discussion, with the past tense verb ‘did’ prosodically stressed to emphasise the grammatical meaning of ‘action in the past’ which closely links to both ‘le’ and ‘guo’. Furthermore, T1 has provided an alternative linguistic pattern for expressing the similar meaning in L2 Mandarin Chinese (line 27) in which she prosodically stressed the perfective maker ‘le’, to echo with the stressed ‘did’ in the previous turn. By doing so, T1 has marked the key property of the grammatical meaning which connects with both ‘le’ and ‘guo’,

cognitively bridges L2 forms and meanings with the concepts shared by both L1 and L2.

In Excerpt 4.3.1, S1 negotiates the differences between ‘le’ and ‘guo’ with T1. Through the interactional moves such as confirmation checks, clarification requests, holding the floor with latched speech, S1 successfully expresses his own conceptualisation of ‘le’ and ‘guo’. His negotiation primarily in lines 5 to 13, regulates T1’s subsequent interaction. While T1 considers S1’s conceptualisation to be problematic (line 15), she in return has to choose to provide more support and assistance regarding the trouble source. T1 focuses on relying on the L1 translation and explanation of the L2 sentences to demonstrate the key properties of the grammatical items under discussion (lines 3, 10, 16, 19, 24 and 29).

In these L1 translations and explanations, T1 keeps using the past tense and the past perfect tense interchangeably, which actually causes confusion to S1⁵. Although a variety of linguistic and interactional resources has been contributed to T1’s explanation, and S1 seems to have accepted the assistance, which is shown by his several receipt tokens ‘oh’, ‘ok’ and ‘yeah’ (lines 20, 23, 25, 28 and 30). It is worth noticing that S1 has demonstrated acceptance but not changed understanding, there is no established evidence to show a mutual understanding between S1 and T1 on the linguistic forms and knowledge under discussion.

T1 closes the interaction sequence after S1 verbally accepts her assistance, then starts a new discussion with other learners regarding the two aspect makers, while S1 disengages in the activities. In the following excerpt, S1 re-engages with T1 regarding the same issue—the differences between two similar sentences contain ‘le’ and ‘guo’. The conversation occurs three minutes after Excerpt 4.3.1.

⁵ The confusion might be caused by the facts that both ‘le’ and ‘guo’ describe actions in the past, but Mandarin Chinese does not have the category of tense, thus ‘le’ does not correspond to English past tense and ‘guo’ also does not correspond to English past perfect tense. The L2 example sentences and scenarios chosen by T1 are not clear examples that can demonstrate their differences. As a matter of fact, regarding the translation, those sentences contain ‘le’ and ‘guo’ provided by T1 all could be roughly translated into English with either past tense, or past perfect tense. The choices are highly dependent on the speaker’s subjective feelings and contexts.

another learner S3 into the discussion.

Excerpt 4.3.3 (reinforcement class, Day 13, Week 3)

- 13 S1: what exactly is the d-
- 14 T1: S3↑(0.8)ehm(0.8)wo xue le yi ge yue de zhongwen
{I study PER one M month MOD Chinese}
{'I studied Chinese for a month'}
- 15 <he> wo xue guo yi ge yue de zhongwen
{and I study EXP one M month MOD Chinese }
{and 'I had studied Chinese for a month'}
- 16 ehm yiyang bu yiyang
{same N1 same}
{are (they) the same or not?}
- 17 S3: ()
- 18 T1: wo xu-
{I study}
- 19 (1.3)((pointing at S1 twice))
- 20 S1: what oh(1.2) wo wo xue le yi yi ge yue de
21 zhongwen(.) and wo xue guo(.) yi ge yue de zhongwen
- 22 T1: hum ((nodding))
- 23 S1: just °I don't know what's the differences° °°between
24 these two °°
- 25 S3: so(1.3) I: wo xue le yi ge I:studied(0.8)Chinese one
26 month
- 27 T1: um↓ hum↑ ((slightly nodding))
- 28 S3: and then wo xue(.)[guo yi ge yue de]
- 29 T1: [guo yi ge yue>] de zhongwen
- 30 S3: so
- 31 (1.7)
- 32 T1: actually it's the same thing but: ehm different

emphasis

- 33 S3: yeah so so
- 34 T1: xue guo ehm means
{study EXP}
- 35 S4: experience
- 36 T1: yeah I have ever(0.9) done Chinese for(.) one(.)
month
- 37 S3: yeah
- 38 T1: ok
- 39 (0.8)
- 40 S1: ok↓ but so it's saying so it'll be translated to the
41 same thing but the emph[asis]
- 42 T1: [ni] xue guo zhongwen ma
{you study EXP Chinese Q}
{have you studied Chinese?}
- 43 xue guo xue guo yi ge yue
{study EXP study EXP one M month}
{studied, had studied for a month}
- 44 S1: but ehm the emphasis on different things
- 45 T1: yeah something ever [ha-
- 46 S1: [the] emphasis is on how long
47 you've [done it before not on when]you did it
- 48 T1: [ni xue zhongwen le ma]
{you study Chinese PER Q}
{did you study Chinese?}
- 49 T1: hum ni qu zhongguo ehm↑ ni qu zhongguo le
{you go China you go China PER}
{you go to China you went to China}
- 50 T1: ni xue zhongwen le ma wo xue le yi ge yue
{you study Chinese PER Q I Study PER one M month}

{did you study Chinese? I studied for a month}

51 T1: or wo xue guo yi ge yue
{I Study EXP one M month}
(I had studied for a month)

52 S1: ok

53 T1: actually about the same thing↑ but

54 S1: but

55 T1: one guo with guo that means you have ever done this
{EXP EXP }

56 S1: ㄛ↑kay(0.7) so

57 T1: have you ever:: had chine- or: Peking duck↑ S5↑

58 S1: °°Okay°°

While S1 re-initiates a request for assistance, T1 does not reply to S1, but chooses to bring another learner (McNeil, 2012) into the discussion and recasts S1's question solely in the L2 (lines 14-16). T1 re-directs focus back to S1 by a DIU (Koshik, 2002; Margutti, 2010) 'wo xu-' (line 18), then waits for 1.3 seconds with deictic gestures accompanied (line 19). S1's response reveals his confusion (*what oh(1.2)*) about T1's purpose of the DIU. After the 1.2-second pause, he repeats two L2 sentences, meanwhile, explicitly informs the teacher again that he does not know the differences between them (lines 23-24). S3 contributes the translation of the 'le' sentence, however, provides no translation to the 'guo' sentence. To this point, S1's repeated requests for help to elaborate on the linguistic properties of the aspect markers lead to T1's choice of bringing other learners into the discussion. This choice is a new strategy in this teaching episode, and it is different from what she has employed in Excerpt 4.3.1.

After 1.7 seconds of silence in line 31, there is no uptake from the learners. In L1 English, T1 explains that the differences between the two aspect markers lie in the emphasis. Rather than extending the explanation by herself, T1 only points out that the difference is relevant to the emphasis of meaning, but prompts the learners with a stressed DIU 'means' to help them to

induct the L2 knowledge with the hint on their own (line 34). Her prompt is picked up by S4 in the following turn, with the expected answer—‘guo’ is emphasising the experience in the past. T1 continues to provide the translation of the sentence with stress (line 36, done) to emphasise the meaning of the ‘guo’ sentence.

S1’s boundary marker ‘ok ↓’ (Nakahama, Tyler and van Lier, 2001) attracts T1’s attention and focus back, he then elaborates on his own understanding and seeks for confirmation (lines 40-41). T1 interrupts his utterances, to be noticed, chooses to explicate the use of ‘guo’ in the form of a dialogue (lines 42-43), which creates a context to use ‘guo’. Although his utterance is interrupted by the teacher, S1 continues to seek clarification for his own understanding of the L2 meanings (line 44). He also interrupts and overlaps T1’s feedback and explanation in line 46 to reveal and expand his personal understanding (lines 46-47). S1’s interactional moves from lines 40-47 demonstrate his classroom interactional competence (Walsh, 2012, 2013), relies on which he is able to get the floor in multi-party conversation in the classroom teaching to express his own ideas about the L2 knowledge as well as to seek clarification and confirmation from T1 to promote his own learning and development.

Although S1’s understanding of the sentence is not completely correct in lines 46-47, T1 does not explicitly explain or correct. Instead, she creates another dialogue (lines 48-51), which is extended, compared to the one created in lines 42-43. The second dialogue embeds both ‘le’ and ‘guo’, resembles the genuine conversation about language learning experiences in L2 mundane interactions, and provides more contextualised information. At the end of the excerpt, S1 uses the acknowledgement tokens ‘okay’ to show the acceptance of T1’s assistance (lines 52, 56, 58). In line 56, it seems that S1 intends to continue the discussion of the current L2 forms as the discourse markers ‘but’ and ‘so’ suggest, however, it is ignored and interrupted by T1, as she changes the pedagogical focus to S5.

With the assistance provided by the teacher and peer learners, S1 gradually changes his understanding of the focused L2 aspect markers. Meanwhile, as S1 repeatedly requests help, after the help provided through the L1 has failed to clarify the issue, T1 has swiftly changed

the interactional resources used in the assistance as well as the ways of deploying them. S1 and T1, regulate each other's use of language and interactional behaviours respectively until they reach a mutual understanding of the grammatical meanings of 'le' and 'guo'. As shown in Excerpt 4.3.1, the deceptive link between L2 'le'/'guo' and L1 past/ past perfect tense, renders the teacher's L1 translation ineffective, which causes S1's repeated questions in both Excerpt 4.3.2 and Excerpt 4.3.3. S1's repeated initiations of mediation in return push T1 to change the mediational resources and strategies from L1 translations to the metalinguistic explanation, then to the contextualised dialogues, in addition to the peer learners' involvement. S1 and T1 co-regulate each other's interactional choices and behaviours, thus co-construct the classroom activities which contribute to the qualitative change of S1's L2 knowledge.

This example in Excerpt series 4.3 shows how S1 and T1, through the use of interactional resources and moves, regulate and negotiate with each other. The co-regulation process helps S1 to understand the grammatical meanings and subtle differences between a pair of aspect markers. In the next example, the transcripts will show how S1 and T1 negotiate the lexical and pragmatic meaning of the idiom 'mama huhu', which means 'so-so, mediocre' and serves the grammatical function as an adjective in Mandarin Chinese⁶. The particular focus is on how to use the term to talk about personal feelings towards the weather. The interaction is extracted from the last session of the data collection, the oral class in Week 4.

Excerpt 4.4.1 (oral class, Day 20, Week 4)

1 S1: can you ↑to say ↑eh ehm(...)eh jintian de tian-tianqi ehm:
{today POS weather }

2 bu: bu re keshi (.) bu(.)leng
{N1 N1 hot but N1 cold}
{today's weather is neither hot nor cold}

⁶ The idiom 'mama huhu' usually is used to convey the subjective feelings of the speaker about things and situations that neither good nor bad, but somewhat involves the speaker's evaluation as 'mediocre'. In a great number of instances, the idiom is also used to manifest the speaker's modesty, which is not relevant to this teaching session.

3 T1: [um] ((nodding))

4 S1: [eh]:(0.7)eh:ni keyi ni ke bu keyi shuo((T1 leaning
{you can you can N1 can say }
{can you, whether can you say...}

5 towards S1))

6 T1: um

7 S1: jintian de tianqi shi: mama huhu↑*
{today POS weather be so-so }
{today's weather is so-so}

8 T1: jintian de tianqi: mamahuhu bu shuo shi mama huhu
{today POS weather so-so N1 say be so-so }
{today's weather is so-so, don't say 'is'}

9 S1: bu shi ok but you can say mama huhu ((smiling))
{N1 be so-so }
{it's not(that) so-so }

10 (0.6)

11 T1: yeah↑ jintian de tianqi zenmeyang↑ mama huhu
{ today POS weather how so-so }
{how is today's weather? So-so}

12 SS: (3.8) ((laughter))

In the first excerpt of this series, in line 1, S1 employs L1 English with rising intonation, gets the floor to initiate a clarification request. From lines 1-7, S1 code-switches to the L2, first elaborates on his intended meaning (lines 1-2), then invites the teacher to evaluate the proposed L2 sentence ‘jintian de tianqi shi: mama huhu↑’⁷ (line 7), in which he mistakenly uses the copula verb ‘shi (be)’. While S1 is trying to elicit help, T1 responds with minimal acknowledgement tokens and continuers to encourage S1 (lines 3, 6). When he

⁷Grammatically speaking, S1’s L2 sentence is understandable, although Mandarin Chinese grammar does not require ‘shi (be)’ in the pattern ‘S+ Adj.’ ‘S +shi +Adj.’ sounds odd and unauthentic, but it is an error frequently made by beginners, especially by English speakers.

finishes the sentence, in line 8, T1 immediately and explicitly corrects the grammatical mistake regarding ‘shi’. However, S1’s original intention is to request clarification from the teacher about whether the idiom ‘mama huhu’ could be used in that context to describe the weather as neither hot nor cold. T1 does not orient to the appropriateness of the idiom but chooses to mediate S1’s grammatical mistake first. There is a mismatch between S1 and T1’s orientations of the content of mediation. This leads S1 to re-state his intention and re-invite T1 to confirm the evaluation (line 9). In his utterance, he stresses the modal verb ‘can’, which is functioning to highlight his focus of the expected assistance. T1 positively agrees with S1’s understanding and models the use of the idiom in line 11 in the form of a short dialogue.

The interaction closes with T1’s modelling and laughter from the learners. After 3.8 seconds, T1 brings back S1’s attention to the appropriateness of ‘mama huhu’ in the particular sentence. T1 changes her evaluation, states that ‘neither cold nor hot’ should not be described as ‘mama huhu’. The following excerpt shows the process of the negotiation of meaning of the idiom, through which S1 and T1 reveal their respective understandings of the lexical term.

Excerpt 4.4.2 (oral class, Day 20, Week 4)

- 13 T1: <bu leng ye bu re> bu shi mama huhu bu leng ye bu re
 {N1 cold also N1 hot N1 be so-so N1 cold also N1 hot}
- 14 hen (shufu) very comfortable
 {very comfortable }
 {'neither cold nor hot' is not 'so-so'. 'neither cold nor hot' is very (comfortable)}
- 15 (2.0)
- 16 S1: mama huhu shi ((laughter))
 { so-so be }
 { 'so-so' is... }
- 17 (0.8)
- 18 T1: mama huhu is so-so okay so-so
- 19 S1: yeah ↓ so it's [not]

- 20 T1: [ke]shi ↑ bu leng ye bu re how come is
 { but N1 cold also N1 hot }
 {but 'neither cold nor hot'...}
- 21 so-so ↑
- 22 (2.5)
- 23 S1: du ↓ i ↑ keshi yinwei ehm(0.8)eh re(.)shi(.)hen hao shi
 {right but because hot be very good be}
 {right, but because hot is good}
- 24 T1: eh ↑ ni xihuan re [re] hao bu shuo re shi
 {you like hot hot good N1 say hot be }
 {you like hot, hot (is)good, don't say 'is' (in
 Chinese)}
- 25 S1: [dui]
- 26 S1: dou: ↑ xihuan re(1.2)duo ren(.)((gesture))xihuan
 {many like hot many person like }
 {many like hot weather, many people like }
- 27 T1: ren dou
 {person all}
 {people all}
- 28 S1: ren *dou* ren dou(0.8) xihuan(.)re
 {person all person all like hot }
 {people all like hot weather}
- 29 T1: wo bu xihuan
 {I N1 like }
 {I don't like (it)}

In line 13, first, T1 recasts S1's previous utterance (Excerpt 4.4.1, line 2) in a more native-like form 'bu leng ye bu re', meanwhile emphasises the recast with the stress and slower pace to re-direct S1's attention back. Follows the recast, T1 explicitly indicates that 'mama huhu' is not the lexical choice for the context. In L1 English, she implies that 'very

comfortable' would be a better choice. After the 2-second silence, interestingly S1 requests T1 to clarify its meaning with a DIU (Koshik, 2002; Margutti, 2010), which is usually employed by teachers to elicit learner responses. His DIU (line 16) is picked up by T1 after a 0.8-second pause, with a prosodically emphasised L1 English equivalent 'so-so'. S1 responds with the acknowledgement token 'yeah ↓' with the falling intonation. The certainty in his intonation shows that cognitively the lexical meaning of 'so-so' is an existing knowledge residing in his ZPD.

Furthermore, in lines 20-21, T1 overlaps S1's utterance with explanation and question to prompt S1 to re-consider 'so-so' and 'bu leng ye bu re (neither cold nor hot)' in the particular context. In L2 Chinese, S1 first accepts T1's explanation ('du↓i↑ (right)'), then suggests his own conceptualisation of 'mama huhu', explains the reasons of his lexical choice for the intended meaning, links the pragmatic meaning of 'mama huhu' with a positive semantic prosody (line 23). Although his L2 explanation contains several grammatical and lexical mistakes, it is understandable. By doing so, S1 successfully deploys L2 Chinese as a mediational and interactional resource to self-regulate his interactional behaviours, while iterating his conceptualisation in the L2 with the expert.

In the following turn, T1 first responds to S1 as the interlocutor in a mundane conversation ('ni xihuan re' (you like hot)), then swiftly shifts her role from the interlocutor in the mundane conversation to the language teacher in the grammatical correction. She explicitly points out S1's misuse of the copula verb 'shi' (line 24). Also in L2, S1 insists on elaborating the rationale of his linguistic choice is that 'hot is good, and many people like hot (weather)' (line 26). His L2 sentence is still ill-formed but understandable and stays as unproblematic for the interaction. T1's reaction is also similar to the previous one. She first corrects the grammatical mistake in S1's utterance by recast (line 27), takes the role of an expert in the classroom. S1 imitates the recast and accordingly reformulates the L2 utterance (line 28). In her response, T1 changes her role of a teacher in the language classroom to an interlocutor in the ordinary conversation by giving her own opinion about the hot weather (line 29).

‘mama huhu’ and the same orientation to the mediation now, in the subsequent interaction, T1 extends the teaching to push S1 to make a more appropriate lexical choice for the intended meaning ‘it’s neither hot nor cold, it’s comfortable’. In her instruction in line 35, she repeats ‘bu leng ye bu re (neither hot nor cold)’ which is mentioned several times by S1 in previous interaction, then code-switches to L1 English (‘very comfortable’) as a prompt. To elicit the L2 form of ‘very comfortable’, T1 uses the L2 Chinese pattern ‘zenme shuo (how to say)’. The L1 English prompt marks the critical elements of the current small task for the learner, while the L2 pattern here is functioning to inform the known information for S1. After a short pause, T1’s mediational utterance has elicited the expected L2 forms from both S1 and S2, as their responses overlap with each other (lines 37 and 38). T1 then positively responds and models the L2 forms again as the confirmation.

The teacher-learner interaction documented in Excerpt 4.4.1-4.4.3 clearly demonstrates the co-regulation between the learner and teacher’s linguistic and interactional choices. S1’s problematic understanding of the L2 form and meaning leads to the teacher’s scaffolding within the ZPD. Through the negotiation and co-regulation process, each co-regulatory interaction leads to S1’s modified understanding. With this co-regulation circle, T1 helps S1 to move in his ZPD to gradually gain the appropriate conceptualisation of the L2 linguistic form.

4.3 Affordances in form-focused instructional interaction

In Chapter 2, I have defined the affordances in this particular CFL context as interactional moves conducted by the teacher or peer learners, that provide support for knowledge-building, meaning-making, deepening understanding towards the linguistic structures and meanings emerge in the interaction, meanwhile open learning spaces and potentialities. For learners, the construct of affordance suggests that they need to become motivated and activated to perceive and make use of these affordances made available in the context for their own L2 learning and development (van Lier, 2000, 2004, 2008b).

In Section 4.2.1, the analysis has focused on the support and assistance provided by the

teacher for S1, in the form of scaffolding during specific L2 tasks. In this section, the instances of support and assistance in classroom activities which do not focus on the completion of specific tasks will be analysed and presented to reveal how the mediational resources are employed by interaction participants to create and activate affordances for focal learner S1's L2 learning. Meanwhile, the analysis also reveals how the affordances made available in the classroom become effective through S1's picking up and recycling.

Excerpt 4.5 is extracted from the transcripts of Week 1's oral class, in which S1 and S2 are working collaboratively to talk about cafés and what they usually do in cafés. S1 has produced an L2 sentence incorporates the grammatical structure 'yibian...yibian...(while...)' (line 107), but he mistakenly put the locative phrase at the end of the sentence⁸. The error attracts T1's attention to intervene (line 114).

Excerpt 4.5 (oral class, Day 5, Week 1)

- 107 S1: uhm:wo(.)uhm xihuan ehm yibian kanshu yibian (.)
{ I like (while)reading (while)}
- 108 he kafei zai(.)uhm(.)ehm Caffè Nero
{drink coffee EXT'at' }
{I like doing some reading while having coffee}
- 109 S2: Uhm
((4 lines omitted))
- 114 T1: (to S2)okay ta de sentence order(.) hao bu hao
{ he POS good N1 good}
{is his sentence order good or not?}
- 115 S1: bu hao((laughing))
{N1 good}
{not good}
- 116 S2: I don't-I forgot what you said
- 117 S1: I said I like(.)I buy some uhm:buy some=

⁸ In Mandarin Chinese, the locative phrase usually is at the sentence-initial position.

119 S2: =and what did you say in Chinese
120 S1: uhm wo xihuan(.) ehm: ehm yibian uhm
 {I like (while) }
121 he kaifei yibian(.) kanshu
 {drink coffee (while) reading}
 {having coffee while reading}
122 and then I said zai(...) Caffè
 {EXT'at'}

123 S2: ehm that should come=
124 S1: =that should be [before]
125 S2: [yeah]
126 S1: wo uhm zai Caffè Nero wo xihuan
 {I EXT I like}
 {I'm in Caffè Nero I like}

T1 is listening to the conversation between S1 and S2, but she does not intervene until she locates an L2 problem. T1 explicitly questions the appropriateness of the sentence order of S1's contribution, draws both learners' attention to the issue. S1's immediate reply (line 115) indicates that T1's support successfully raises S1's awareness of the L2 problem. In addition, S2 makes a clarification request to S1 to clarify his L2 contribution, to which S1 chooses to explain in L1 English rather than repeating the L2 sentence. S2 interrupts then requests him to elaborate on the meaning in the L2 (line 119). While S1 reformulates his L2 sentence, S2 points out the error in L1 English (line 123). Her explanation is interrupted and latched by S1's utterance (lines 123-124). With the latched speech, S1 provides an explanation by himself, corrects the error that the position of the adverbial locative phrase 'zai Caffè Nero... (at Caffè Nero)' should precede the clause, to be put at the beginning of the sentence. His explanation is overlapped with S2's acknowledgement token 'yeah' in line 125.

As it is evident in the latched and overlapped speech from lines 123-125, before S2 could finish her explanation about S1's L2 problem, S1 voluntarily provides the explanation. It

indicates that the knowledge about the position of the adverbial locative phrase is already set in place in his L2 repertoire, but he is not able to apply the knowledge consciously in actual language use in the context. In line 126, as a result of the affordances provided through T1's question as well as the peer mediation, S1 tries to form the L2 sentence in the correct way.

In this excerpt, S1 first independently produces an L2 sentence which reveals his current L2 ZPD, shows his L2 ability while no assistance is provided. T1's prompt and S2's peer assistance, provide the affordances to raise his language awareness of the sentence order in Mandarin Chinese. In addition, the mediation activates his existing but inactive L2 knowledge to extend the understanding. S1 also displays his learner agency by responding and reacting to T1 and S2's assistance.

S1's performance in this excerpt reveals more complexity about L2 learners' ZPD. The errors made by learners do not necessarily mean that they lack the relevant L2 knowledge, it might attribute to the lack of ability to consciously connect and enact the relevant existing knowledge reside in their L2 repertoires within the context.

The second example of affordances in the classroom is extracted from Week 3's oral class. The classroom interaction is about the learning of a nominal compound 'Ouzhou guojia (European countries)'. Prior to the interaction documented in Excerpt 4.6.1, S1 and S2 have been discussing their travelling experiences. S1 makes a statement in the L2 that he has visited many European countries (line 15). However, his L2 utterance contains an error, as he uses the semantic morpheme 'guo' (means 'country') which could not stand independently as a word. The correct form should be 'guojia' which requires two syllables⁹. In the following interaction, T1 has provided affordances to assist S1.

⁹ In Mandarin Chinese, which used to be classified as a monosyllabic language, in most cases, each character represents one semantic morpheme. As the language changes over time, while each semantic morpheme bears some general meaning, most of the words are constituted with at least two semantic morphemes. Based on this feature, some researchers in Chinese linguistics now classify Mandarin Chinese as a polysyllabic language (Li and Thompson, 1981).

Excerpt 4.6.1 (oral class, Day 15, Week 3)

15 S1: so (...) ehm(1.2) wo ehm:(0.6) qu guo (...) ehm(...) ehm
{ I go EXP }

16 ouzhou(0.7) de(0.8) ehm guo*
{ Europe POS coun(try) }
{ I have visited European coun(tries) }

17 S1: (4.1) [((looking at S2 then looking at T1))]

18 T1: [((leaning towards S1, nodding))]



19 S1: ehm ouzhou(1.2) de
{ Europe POS }
{ European }

20 T1: guojia
{ country }
{ countries }

21 (3.5)

22 S1: ehm(...) eh↑ I'm trying to say I went to () a lots of
23 countries in Europe

24 T1: yeah↑

25 S1: hen
{ very }

26 T1: ((nodding))

27 S1: ehm(...) ehm(...) zai zai ouzhou hen(.) duo(.) guo
((laughter))
{ EXP EXP Europe a lot coun(try) }
{ in in Europe, a lot of coun(tries) }

28 T1: ((laughter)) wo <qu guo: henduo:>

{I go EXP a lot }

{I have visited a lot of}

29 (1.3) ((move her eyes on S2))

30 S2: guojia zai ouzhou↑(0.8)

{country EXT Europe }

{countries in Europe}

31 it's the same mistake ok no no ok and

32 S1: wo zai

{I EXT}

{I'm in/at...}

When S1 completes his L2 sentence, during the significant 4.1 seconds of silence (line 17), he first makes eye contact with S2, then shifts to make eye contact with T1. His nonverbal behaviour reveals the uncertainty towards his own L2 products, which leads him to solicit assistance from other participants in the interaction. Instead of explicit intervention, T1 leans towards S1, encourages him to produce the target form, which has just been emphasised around 2 minutes ago in the interaction between T1 and the learners in another group. S1 responds with the repetition of ‘ouzhou de (European)’ which is accompanied by 1.2-second silence (line 19), but his existing knowledge is not sufficient to solve the problem on his own. In the following turn, T1 models the correct lexical form, but there is no uptake from S1. S1 chooses to clarify his own meaning in L1 English (lines 22-23). The clarification shows his awareness of the L2 problem mismatches with the teacher’s mediational focus. To be more specific, S1 is aware of the existence of the problem but has no clear knowledge about the nature of it. Hence, he elaborates his intended meaning in L1 English for the teacher. However, from the teacher’s side, she locates the L2 problem at the beginning of this mediation sequence and has been providing assistance implicitly without clearly indicating the L2 problem for S1. In the remainder of the interaction, T1 has not provided more assistance other than prompting S1 with a DIU (line 28).

Through the beginning of the interaction to line 32, T1 affords the learning opportunities

implicitly through several hints and continuers (lines 18, 21, 24, 26, 28 and 29) without explicitly pointing out the L2 problem. The affordances provided through modelling (line 20), wait time (lines 17, 19, 21, 29), kinesics (line 18, 26), eyes contact (lines 17, 18, 29) and paralinguistic resources (lines 24, 28), highlight the discrepancies in S1's original L2 contribution. Thus these affordances create several opportunities for S1 to realise the L2 issue. However, although S1 shows the learner agency (Ahn, 2016) and has been actively engaged in this activity, the affordances activated through different channels by T1 presented in Excerpt 4.6.1, on the contrary, are not able to be picked up by S1. The seemingly rich affordances are not tailored and altered according to S1's particular learning needs.

In Excerpt 4.6.1, the mismatch between the nature of the L2 problem and the affordances available in the context leads to the ineffective teaching interaction, in which the learners are not able to correct the problematic use of 'henduo guojia zai Ouzhou'. In Excerpt 4.6.2, T1 has changed the assistance provided.

Excerpt 4.6.2 (oral class, Day 15, Week 3)

- 33 T1: henduo: ouzhou is described what- which kind of the
 {a lot Europe}
- 34 countries
- 35 S1: ehm
- 36 T1: <European> countries
- 37 S2: Ou[zhou]
 {Europe/European}
- 38 S1: [ehm] o-ouzhou de(.) guojia
 {Europe POS country}
 { European countries }
- 39 T1: Ouzhou guo ↑jia
 {Europe country}
 {European countries}
- 40 S1: Ouzhou guojia

{Europe country}
{European countries}
 41 T1: um hum
 42 S1: so wo qu guo(.) ehm hen(.) henduo guojia henduo
 { I go EXP very a lot country a lot }
 43 o-ouzhou(.) guojia
 {Europe country}
 {so I have visited a lot of countries, a lot of European countries}

In line 33, T1 starts to clarify and decompose the grammatical structure of ‘Ouzhou guojia (European countries)’¹⁰ in a metalinguistic-related talk (lines 33-34). In addition to the metalinguistic explanation of the grammatical function of the first noun ‘Ouzhou’, she employs the specific L1 equivalent of ‘Ouzhou guojia’ (line 36) in which ‘European’ is emphasised through the prosodic stress and slower tempo. By bringing in the L1 equivalent with emphasis, T1 has linked the L1 semantic and grammatical meaning with the target L2 form. By doing so, she activates the L1 resources as affordances for learners to deepen their L2 understanding. This L1 affordance made available in interaction is actively picked up by S1 and S2, which is evident in S1’s reformulated L2 utterance (line 38). In line 39, T1 models the correct L2 form, to which S1 imitates, furthermore, he actively reformulates his L2 sentence. In his reformulation, first he omits the noun ‘Ouzhou’, but the problem has been immediately self-corrected (lines 42-43). His reformulation, as well as self-correction of the error, displays a better autonomy towards the understanding of the noun phrase ‘Ouzhou guojia’.

Excerpt 4.6.1 and 4.6.2 provide examples of the provision of affordances by T1. When the affordances mismatch with S1’s actual learning needs, S1 does not act upon the affordances

¹⁰ The noun ‘Ouzhou (Europe)’ is treated as an attributive to denote the second noun ‘guojia (country)’ in this phrase. The difficulty encountered by S1 probably attributes to the rationale of constituents in the nominal compound, which is beyond beginning learners’ knowledge.

made available. In this episode, the L2 problems encountered by S1 and S2 are actually different in nature. For S1, the L2 problem is to differentiate ‘guo’ as a constituent morpheme in the word, and ‘guojia’ as a noun. The L2 problem for S2 (see Excerpt 4.6.1, line 30) is that he treats the target form ‘Ouzhou guojia’ as a locative phrase, rather than a nominal compound. While S1 is struggling between the L2 morpheme ‘guo’ and the noun ‘guojia’, S2 is consistently influenced by the L1 structure ‘countries in Europe’ as he directly translates the L1 into the L2 (guojia zai ouzhou ↑(0.8)) in many attempts in the subsequent interaction (transcripts not presented). The affordances made available in T1’s instruction do not clearly and precisely address either S1’s L2 problem or that of S2. After several implicit hints have failed to mediate the learners’ understanding, T1 resorts to the L1, activates it as a psychological tool to regulate the learners’ learning and conceptualisations.

In the next series of transcripts, affordances that are more effective in the learning process will be presented. The data is extracted from the interaction in the last week, in which learners are preparing for the coming exams. In the following Excerpt series 4.7, S1 initiates a mediational sequence to solicit help from T1. Before the interaction starts, S1 has already made several attempts to get T1’s attention.

Excerpt 4.7.1(revision class, Day 16, Week 4)

- 1 S1: laoshi ↑(1.0) zenme shuo teach(1.4) zenme zenme shuo teach
 {teacher how say how how say }
 {teacher, how to say'teach'? how how to say'teach'?}
- 2 (0.7)
- 3 T1: jiao
 {teach}
- 4 S1: jiao oh
 {teach}
- 5 T1: ehm: yaoshi ni bu hui shuo teach ni keyi shuo I
 { if you N1 can say you can say }
 {if you don't know how to say 'teach', you can say}

6 learn Chinese from↑

7 S1: yeah

8 (0.7)

9 T1: yeah we did that(.) I learn Chinese from him(0.7)or=

10 S1: =is it from is in ehm to I go from one place to another

11 place() to is it

12 T1: ((shaking head))()

13 T1: zenme shuo I learn something from somebody↑ I learn Taiji
 {how say TaiChi}
 {how to say TaiChi}

14 from(...) ()some something↑ ((to S2))

15 (1.0)

16 S2: gei↑

17 T1: (1.5) ((shaking head))

18 T1: you wi↑th the person

19 (1.8)

20 S2: gen↓
 {with/from}

21 T1: gen yeah↓<wo gen ta xue> zhongwen xue le((to S1))
 {with/from}I with he learn Chinese learn PER}
 { I have learnt Chinese from him...}

22 to tea↑ch is jiao

23 S1: yeah

24 T1: jiao(.) ta jiao wo
 {teach he teach I}
 {teach he teaches me}

25 S1: ok ta ta jiao wo=
 {he he teach I}
 {he he teaches me}

26 T1: =<or wo [gen] ta xue>

{I with/from he learn}

{I learn from him}

27 S1: [wo gen]

{I with/from}

The mediation sequence starts with S1's initiation of help to elicit the L2 form for 'teach'. T1 directly gives the expected word choice 'jiao (to teach)' then she pushes the learner to use an alternative expression for the similar intended meaning (line 5). This provides learning opportunities for S1 to expand his L2 repertoire, bridges the two different L2 forms which link to the same meaning. In response, S1 gives the minimal response then stay in silence for 0.7 second. The silence, on the one hand, indicates that S1 is not capable of providing the expected alternative L2 forms for the prompt; on the other hand, it also indicates that more assistance is needed. At this moment, the affordances created by T1 have not been effective to bring S1 new knowledge, as he does not make use of them.

T1 pushes further to explicitly point out that the alternative sentence pattern is not new (line 9). S1 actively responds to the teacher's new prompt, which is evident in his latched speech seeking for clarification and confirmation about his own conceptualisation of T1's assistance (lines 10-11). He has tried to link the L2 forms under discussion with his existing knowledge, but mistakenly confuse the preposition 'gen (with/from)' with another preposition 'cong (from)'¹¹. This might attribute to the English preposition 'from' in T1's prompt (line 9), or to the fact that the translation of 'gen' provided in the textbook is 'with/from'. Through lines 15 to 18, T1 gives learners extensive wait time, L1 hints and prompts. In line 20, after several failed attempts, S2 provides the expected L2 form for the pattern. T1 acknowledges S2's contribution, models the use of the 'gen' structure in an L2 sentence at a slower pace. In her

¹¹ 'cong' is a frequently used preposition in Mandarin Chinese, it is usually introduced at the very early stage in L2 Mandarin Chinese courses. In beginners' Chinese, 'cong' means a starting point in location or time, it is translated as 'from' in most L2 Chinese textbooks. 'cong' often collocates with another proposition 'dao' to form the 'cong...dao...' structure, translated as 'from...to...'. For example, 'from A to B'—'cong A dao B'. S1's utterance in Excerpt 4.7.1, lines 10-11 shows that he understands and is very familiar with the meanings and use of 'cong' and the 'cong' structure.

following utterance, T1 emphasises ‘jiao (to teach)’ with prosodic stress (line 22) then models the whole L2 sentence (line 24), which is imitated by S1. Her latched modelling of the alternative sentence pattern at a slower pace and her use of ‘or’, highlights the similarities lie in the semantic meanings of two structures. Her interactional moves, such as emphasising and modelling, create spaces for S1 to link his existing L2 knowledge with the ones he has not yet appropriated.

The next episode shows how the affordances created by T1 through interaction discussed above impact S1’s appropriation and externalisation of the structure.

Excerpt 4.7.2 (revision class, Day 16, Week 4)

38 S1: wo wo gen ta x- ehm(.) ni ni ehm ni gen
 {I I with/from he you you you with/from}
 39 ta ehm duochang xue (...) zhongwen*
 {he how long learn Chinese}
 {I (learn) from him, how long have you been learning
 Chinese from him?}
 40 S2: ok

In Excerpt 4.7.1, S1 imitates T1’s modelling several times (lines 4, 25, 27). In the above line 38, first he partially imitates the modelling utterance but does not accomplish the whole sentence, then he forms a sentence directed to S2 to elicit genuine information. His L2 performance illustrates that with the assistance provided by the teacher and peer learners in the classroom, although his L2 question in lines 38-39 is still problematic in general, he is now able to posit the L2 verb ‘gen’, which used to be his trouble source, in the sentence appropriately.

Moreover, he does not simply repeat the L2 phrase ‘wo gen ta’ but independently changes the personal pronoun from ‘wo (I)’ to ‘ni (you)’. His imitative action is the one that described as ‘reflexive imitation’ (Poehner, 2008), which is a vital step in L2 developmental process. The

reflexive imitation is also the evidence that the various affordances provided in the context through teacher-learner interaction are effective for S1's specific development of the L2 structure involved. It is noticed that the partial imitation in line 38 reveals S1's cognitive processing of the L2. As it is elliptical, and it is not directed to the interlocutors in the context, this partial imitation is a private speech. This private speech is the evidence that when learners engage in challenging L2 activities, the self-regulatory function of language is externalised to the social plane to regulate their L2 behaviours (John-Steiner, 2007; Centeno-Cortes and Jimenez-Jimenez, 2004, see more discussion in Section 4.4.2).

4.4 L1 as an established psychological tool for mediation and L2 learning

In Section 4.2 and 4.3, how the mediation is carried out between S1 and the teachers in the interactional practices is discussed through analysing the teacher-learner mediation sequences. In this section, the analytic focus is a vital and indispensable resource in the L2 classroom—L1 use.

The nature of being a beginners' language class of this CFL context, determines that the use of L1 English in class is pervasive and inevitable. In this section, first, the analytical focus will be the use of L1 English by two language teachers during the instructional activities. The analysis aims to reveal L1's discursive and mediational functions as linguistic resources and a psychological tool to assist the focal learner's L2 learning. Second, from sociocultural and ecological perspectives of language learning, L2 learners are treated as active agents for the learning rather than passive receivers of input knowledge. Therefore, L1's intrapersonal mediational functions which are made relevant by S1 for his L2 development are also analysed and presented.

4.4.1 L1 mediation at the interpsychological level

One of the most frequent discursive functions of the L1 use in this classroom by the teachers is to provide L1 equivalents for the particular L2 linguistic forms. The first example of L1 use demonstrates how the meanings of L1 assist S1 for a word search in the translation task in a grammar lecture.

Excerpt 4.8 is from the grammar lecture in Week 4. The particular task for S1 is to translate the sentence ‘wo yiwei wo shangge xingqi gang mai de shouji shi zuixin de chanpin (I thought the mobile phone I just bought last week is the latest product)’. The trouble source identified is the noun ‘shouji (mobile phone)’.

Excerpt 4.8 (grammar lecture, Day 17, Week 4)

4 S1: [shang xingqi] gang mai
 { last week just buy}
 {just bought last week }

5 (2.0)

6 T2: gang mai (...) de ↓
 {just buy MOD}
 {the one that just bought}

7 S1: de
 {MOD}

8 (0.7)

9 T2: mobile phone ↑

10 S1: ehm eh::: sh:ouji
 {mobile phone}

((23 lines omitted))

43 T2: shi
 {be}
 {is}

44 S1: shi xin: eh (...) chan(.)pin
 {be new product}
 {is (a) new product}

45 T2: shi (0.7) the latest
 {be }
 {is }

46 (...)

47 S2: °zui xin° ↑
 {most new}
 {the newest/latest}

When S1 tries to translate the noun phrase ‘the mobile phone I just bought last week’ which is comparatively complex for S1’s current L2 proficiency, he is only able to translate part of the phrase (line 4), but encounters difficulty while producing the attributive particle ‘de’ and the

noun ‘shouji’. According to his revealed ZPD, in line 9, after the 0.7-second pause, T2 provides the L1 equivalent of ‘shouji’ as a direct prompt to help S1 with the word search. In line 10, although with long hesitation, S1 produces the correct L2 form. As the teaching activities proceed, S1 tries to translate the last part of the aforementioned complex L2 sentence ‘wo yiwei wo shangge xingqi gang mai de shouji shi zuixin de chanpin (I thought the mobile phone I just bought last week is the latest product)’. The trouble source now becomes the attributive noun phrase ‘zui xin de chanpin (the latest product)’. In line 44, S1 shows the ability to produce the phrase ‘xin chanpin (new product)’ but fails to convey the meaning of ‘latest’ through the use of the superlative degree prefix ‘zui’. As a result, after the short pause, T2 directly provides the L1 equivalent of ‘zuixin (the latest/ newest)’. Another learner picks up the L1 prompt, produces the superlative degree phrase (line 47) which concurrently provides peer assistance as an affordance for the focal learner S1.

In Excerpt 4.8, T2 uses L1 equivalents to elicit L2 forms from S1. In the next example, L1’s mediational function is slightly different. It is similar to the provision of L1 equivalents for eliciting in appearance but different in nature. L1 equivalents are acting as the complementary explanation for L2 explanation to provide extra and clearer support for S1’s L2 understanding. The interaction in Excerpt 4.9 happens in the reading and writing class in Week 3. In prior interaction, S1 invites T1 to check the appropriateness of his L2 sentence, in which he misuses the L2 adverbs ‘zai’ instead of the correct choice ‘you’¹². Accordingly, T1 elaborates the meaning of the target sentence under discussion: ‘yinwei ta qiannian qu guo le, qunian you qu le (because she has been (there) 2 years ago, she went there again last year.)’.

Excerpt 4.9 (reading and writing class, Day 14, Week 3)

27 S1: ok and=
 28 T1: =yinwei ehm:(0.8) ta: qiannian
 {because she the year before last}
 29 the year before last↑

¹² ‘zai’ and ‘you’ both mean ‘again’, the repetition of actions. The difference is that ‘zai’ indicates the repetition of actions in the future, while ‘you’ indicates that the repetition is in the past.

observed that at the interpsychological plane, the language teacher T1, relies on L1 to suggest L2 use ‘hypotheticality’(Antón and DiCamilla, 1999)— possible values and meanings in the context, which controls the degree of complexity of L2 tasks hence makes the task more manageable for learners.

The data presented in the following transcript is taken from the oral class in Week 1. Before the interaction begins, T1 has assisted S2 and S3 to understand the adverbs ‘cai’ and ‘jiu’¹⁴. S1 does not join the discussion verbally but actively attends to the interaction (Young, 2013), then T1 shifts her attention back to S1 by allocating the turn to him. The L2 sentence they are discussing is ‘(she can’t drink now, but) she will be able to/be allowed to drink soon’ which is produced by S3 as ‘ta mashang jiu neng hejiu le’ in prior interaction. At the beginning of Excerpt 4.10, S1 is required to repeat S3’s contribution.

Excerpt 4.10 (oral class, Day 5, Week 1)

- 1 T1: S1 ↑ qing ni zai shuo yi bian S2:
 {please you again speak one time }
 {please say it one more time }
 2 S1: ((laughter, checking the textbook and notes))
 3 S2: ((laughter))
 4 T1: she can't drink(.) now:↑ °um↑ hum↓°
 5 S1: ehm:(...)S2 bu ehm ehm S2 xianzai ehm bu neng (.)
 { N1 now N1 can
 6 ehm:(...)hejiu(.) ehm keshi(1.0) aah:::

¹⁴ ‘cai’ and ‘jiu’ is a pair of adverbs focusing on describing the subjective personal feelings about time and time duration. If a speaker considers the time duration of a certain action to be long, or the time point a certain action occurs/finishes to be late, ‘cai’ would be the choice. On the contrary, if a speaker considers the time duration of an action is short, or the time point an action occurs/finishes to be early, the better lexical choice is ‘jiu’. The relevant but contrasting grammatical meanings of this pair of adverbs are a frequently encountered issue for L2 Chinese beginners. The choices depend on a speaker’s subjective considerations rather than the objective descriptions of time or time duration of a certain action. For example, it takes 10 days to finish reading a book, if a speaker thinks 10-day is too long for reading a book, he/she can use ‘cai’ to convey this meaning; if he/she thinks 10-day is a short time to finish reading a book, ‘jiu’ is the choice for the feeling.

{ *drink(alcohol) but* }
 {S2 *can't drink alcohol now but* }
 7 T1: you can say two weeks later↑
 8 S1: ehm:(1.9) ()ah:I want to use ranhou but that's not
 9 correct is↑ it
 {*...and then*}
 10 T1: ()
 11 S1: ranhou
 {*...and then*}
 12 T1: bu shi ranhou ranhou shi and then(.)af-two weeks
later
 {N1 *be be* }
 {(you) *can't say 'ranhou', 'ranhou' is '...and then'*}
 13 S1: [ehm:]
 14 T1: [ah]give the time first
 15 S1: yeah(...)ehm: liang ge xingqi(.) ranhou
 {*two M week and then*}
 {*two weeks and then* }
 16 (...)
 17 T1: um:not ranhou [ranhou] shi and then

With the laughter and the action of checking the textbook and notes (lines 2-3), S1's behaviours indicate the fact that the current task still seems challenging for him. T1 sensitively picks up the cues, thus in line 4, she relies on L1 to explain the pragmatic connotation of the sentence. The connotation is that the sentence 'Ta mashang jiu neng hejiu le (she will be able to/allowed to drink soon)' encompasses the meaning of 'she can't drink now'. In Mandarin Chinese, this meaning is fulfilled through the adverb 'jiu'. 'she can't drink now' is the presupposed context for understanding the second clause with 'jiu'. The L1 sentence 'she can't drink(.) now:↑' serves the function of providing one of the possibilities and meanings available in that context, which is important for understanding the

L2 adverbs. The provision of L1 here contribute to lowering the difficulty for S1. In addition, the modal verb ‘can’t’ and ‘now’ are stressed. Moreover, ‘now’ is elongated with a rising intonation, these paralinguistic resources are signalling the semantic and pragmatic relevance between ‘can’t’, ‘now’ and ‘jiu’. Building on T1’s L1 assistance, S1 translates it into the L2, although his L2 utterance accompanied by hesitations and pauses (lines 5, 6).

There is a one second pause and ‘aah: : :’ follows ‘keshi (but)’ which is relatively long in the classroom context, indicates that S1 struggles in continuing. T1 responds with the L1 prompt accompanies the rising intonation ‘you can say two weeks later↑’ (line 7), strategically suggests another ‘hypotheticality’(Antón and DiCamilla, 1999) to S1 in the context. By making the suggestion that S1 could consider ‘she will be able/allow to drink in two weeks’ while exploring the meaning of ‘jiu’, L1 helps T1 to guide the learner to focus on one of the presupposed contexts that is compatible with ‘jiu’. L1 use confines the range of meanings for S1 to focus on for the production of the expected L2 forms, to understand the linguistic forms in context, rather than trying to remember the grammatical explanation for the use of ‘cai’ and ‘jiu’ by rote.

T1’s L1 use lowers the difficulty and simplifies the L2 processing, makes the L2 more manageable, then provides learning opportunities for L2 development. In the subsequent interaction, the same mediational strategy is deployed again. T1 recasts this assistance but adds stress (two weeks later) in line 12, emphasises its cognitive importance in understanding the time phrases here with the appropriate incorporation of ‘jiu’.

In the beginner level L2 classroom, learners’ relatively low L2 proficiency defines that it is inevitable and insufficient to instruct exclusively in L2 when learners’ L2 proficiency has not developed into the appropriate level (Swain *et al.*, 2009a). Especially when the learning object is the abstract and complex metalinguistic knowledge and concepts, L1 becomes a pivotal mediational resource. In the following examples, the interpretation of data focuses on how teachers use L1 to mediate the understanding of the complex, sophisticated and abstract metalinguistic knowledge.

In Excerpt 4.11 the teacher-learner interaction is extracted from the grammar lecture in Week 2. While it is S1's turn to translate one L2 sentence in the Dialogue section in the textbook, T2 improves S1's understanding through L1 assistance. The target sentence under discussion is 'Yinwei wo nüpengyou xihuan. Ta shuo Zhongguo zhizao de dongxi you pianyi you hao' (Because my girlfriend likes (it/them). She says that the things made in China are both cheap and good).

Excerpt 4.11 (grammar lecture, Day 7, Week 2)

- 1 T2: the answer is ↑
- 2 S1: ehm yinwei wo nüpengyou(.) *you*(.) xihuan ↑
 {because I girlfriend like }
 {because my girlfriend likes (it/them)}
- 3 T2: wo nüpeng[you]
 {I girlfriend }
 {my girlfriend}
- 4 S1: [nüpeng]you xihuan
 {girlfriend like(s)}
- 5 T2: [xihuan]
 {like}
- 6 S1: [that's right] it's ()
- 7 ta: ta shuo zhongguo *zhi*zao de(.) dong-
 {she she say China produce MOD things}
 {she she says that the thing made in China }
- 8 T2: zhizao de
 {produce MOD}
 {produced}
- 9 S1: zhizao de(.)dongxi(.) you(.) pianyi(.) you hao
 {produce MOD thing again cheap again good}
 {things produced (in China)are both cheap and good}

4.4.2 L1 mediation at the intrapsychological level—private speech

SCT researchers point out that, the process from object-regulation to self-regulation is reversible (Vygotsky, 1986; Lantolf and Thorne, 2006). Adults tend to use private speech as a psychological tool (Centeno-Cortes and Jimenez-Jimenez, 2004; Lantolf and Thorne, 2006; John-Steiner, 2007) to regulate their behaviours when confronted with challenging and complex tasks which beyond their capabilities to complete it internally. In this CFL context, some language activities S1 involves in are challenging for his L2 ZPD, during the classroom observation, the instances of L1 private speech are observed to be assisting S1's L2 learning.

The first example is extracted from the transcripts of the oral class in Week 1. Before the interaction starts, T1 is discussing the pronunciation of some lexical items with S1 and S2, when the problem has been solved, S1 and S2 decide to shift their focus back to the task of describing a picture.

Excerpt 4.13(oral class, Day 5, Week 1)

86 S2: [zhuang zhuang] okay ehm(.)huazhuang ((laughing)) ehm (...)
{makeup makeup do the makeup}

87 gege yibian shuijiao
{elder brother while sleep}
{while the elder brother is sleeping}

88 S1: °shuijiao°(1.3)ehm (.) yeah↑ that is that's what↑ is=

{sleep }

89 S2: =you can make up a story

90 S1: what↑ it is °what is this° ehm(...)ehm (...)

91 S1: ah(0.9)let me () (...)ah(1.2) you could say



In lines 86-87, S2 imitates T1's modelling of the pronunciation of 'huazhuang (do the makeup)' then she produces an L2 sentence to resume the interrupted conversation. S1 repeats the verb 'shuijiao (to sleep)' which is previously provided by S2 in a lower volume that followed by a 1.3-second pause and an acknowledgement token 'yeah↑' with rising intonation. He does not respond to S2's L2 contribution. The lower volume of the speech, pause and acknowledgement token together indicate that the utterance is self-directed, the repetition and imitation of 'shuijiao' is a private speech, which guides his thinking process to understand and take control of its meaning and pronunciation. His continuing utterance in line 88 is latched by S2's suggestion. However, S1 does not respond to S2's suggestion but keeps uttering 'that is that's what ↑ is=', meanwhile, refers to the textbook and picture.

First, his utterances in lines 88 and 90 take the form of a question but do not interactively direct to S2 in the context. It is obvious through the demonstration of the screenshot, that he does not make eye contact with S2, but keeps focusing on the materials at hand. Although his utterances are questions in normal volume, however, S2 does not respond to them as well. Second, questions in his utterances are elliptical, some grammatical slots are omitted. These features of his utterances are in accordance with the features of private speech summarised by researchers (Antón and DiCamilla, 1999; Lantolf and Thorne, 2006; Poehner, 2008). These L1 utterances in nature are self-directed to the learner himself, serve the cognitive function to guide his thinking process during the organisation of L2 linguistic products.

The next example also shows how the L1 private speech facilitates the learning and thinking process, thus creates the learning spaces for L2 development. The example is also chosen from the oral class in week 1. In this small group talk, the task is about cafés in the UK and what people do in cafés.

Excerpt 4.14(oral class, Day 5, Week 1)

1 S3: ni ne?
 {you SFP?}
 {What about you?}

2 S1: ehm(.) wo bu xihuan ehm Xing Ba Ke yinwei: tamen:ehm
bu

{ I N1 like Starbucks because: they:
N1}

3 eh:(0.8)eh:(...)eh:bu ah:°>how to how to< how to
explain°



{N1}

4 tamen bu gei(.)ehm(.)yingguo(.)qian ↑
{they N1 give the UK money ↑}
{I don't like Starbucks because they don't don't give
money to the UK}

5 (2.5) ((T1 nodding to S1))

6 S2: °I don't [(know)°]

7 S1: [They] don't pay tax ((T1 nodding))

**((4 lines of L1 learner interaction about Starbucks
omitted))**

12 T1: tamen bu gei shui ↓
{they N1 give tax ↓}
{they don't pay tax}

13 S2: oh: ↑

14 S1: tamen bu gei shui ↓
{they don't pay tax}

15 T1: Ok [°hao°]
{good}

In line 2, in response to S3's question of his opinion about Starbucks, S1 tries to convey his meanings in the L2. However, he encounters a problem while forming the second clause, which is evident in his hesitations and pauses in line 3 (eh: (0.8) eh: (...) eh:bu ah:). Moreover, his utterance '°>how to how to< how to explain°' is delivered at a slightly quicker pace with low volume. Also, it can be seen from the video recording that when producing this utterance, S1 is touching his chin with the left hand while his right hand is producing a beat gesture, makes no eye contact with three other interlocutors. The linguistic, non-linguistic and posture features of S1's interactional moves signal that the L1 utterance in line 3 is self-directed, externalised private speech, cognitively functioning as mediation for his vocabulary search (Saville-Troike, 1988; Ohta, 2001a; DiCamilla and Antón, 2004). The self-directed private speech explicitly shows that he is not capable of forming the sentence independently, thus displays his L2 ZPD. From the following turns, it can be seen that his intended meaning is 'they don't pay tax to the UK' (line 7). Since the noun 'shui (tax)' is not in his L2 repertoire, S1 employs the acquired noun 'qian (money)' to replace 'shui (tax)'.

While the group is discussing and practising, T1 has been attentively listening to their discussion. She does not intervene until line 12 with a recast sentence, in which the key words 'gei (to give)' and 'shui (tax)' are stressed with a falling intonation (tamen bu gei shui ↓). The recast models the more appropriate L2 sentence, and with the prosodic stresses, it emphasises the key elements. S1 repeats the modelling sentence, moreover, the stressed 'shui (tax)' and falling intonation are also imitated. This is a vivid example that L1 English has been utilised by S1 to interact with himself intrapsychologically, to distance himself from the current task, and externalises his process of thinking when he encounters challenging L2 problems (Frawley, 1997).

4.5 The gesture-speech alignment as mediational resources



In this section, the gesture used by language teacher T1 in conjunction with speech—the gesture-speech alignment in grammatical explanations and instructions will be identified and analysed. The interpretation of data shows how pivotal mediational functions of teacher

gestures are enacted during the interaction, to provide assistance and add another layer of affordances other than linguistic verbal medium (Smotrova and Lantolf, 2013) for the focal learner's improving and modified L2 understanding.

In the first example, in Excerpt 4.15, the focus of the instruction is on the meaning of the grammatical structure 'yibian...yibian' (...while...). S1 and S2 are engaging in pair work to describe what people are doing with a picture (see Appendix G). They collaboratively work on the production of an L2 sentence 'mama yibian zuofan, baba yibian dasao fangjian (Mom is cooking while dad is tidying the room)'. T1 has intervened right after S1 has produced the incorrect sentence.

Excerpt 4.15 (oral class, Day 5, Week 1)

<p>14 15 16</p>	<p>S1:</p>	<p>so mama yibian zuofan baba (...) yibian eh:: (...) *dasao* (...) {mon (while) cook dad (while) tidy} *fangjian* {room} {so mom is cooking while dad is tidying the room*}</p>		
<p>17</p>	<p>T1:</p>	<p><u>yibian</u> yibian shi <u>yi ge</u> { ...while... be one M }</p>		<p>Showing the right index finger in front of her face</p>
<p>18</p>		<p>ren zai <u>yi ge</u> shihou {person DUR one M time }</p>		<p>showing the right index finger in front of her face</p>

19		<p>zuo <u>liang ge</u> shi {do two M thing} {'...while...(while)' means one person doing two things simultaneously}</p>		<p>putting her both palms aside her body while gesturing 'two'</p>
20		<p>bu shi <u>liang ge</u> ren zuo yi [yang ehm] {N1 be two M person do one [M ehm]} {not two people doings thing at one time}</p>		
21	S2:	<p>[oh you] can't do that</p>		
22	S1:	<p>ah</p>		

23	S2:	it has to be one person		lift up the left index finger
24	T1:	eh:		
25	S1:	[oh:]okay		
26	S2:	[oh:]		smiling

T1's intervention takes the form of a long teacher talk (lines 17-20). The long explanation is delivered in the L2 with prosodic features, accompanied by hand gestures. In her long monologue, T1 elaborates on the grammatical meaning of the focused grammatical pattern in a fashion that is both simple and compatible with learners' current L2 proficiencies. While choosing the L2 to explicate the abstract meanings, T1 delivers her speech at a slower tempo. Besides, she incorporates gestures as part of the mediation. It can be seen from the screenshots of the video recording, that T1 stresses the phrase 'yi ge (one)' in both lines 17 and 18. The stressed phrase is accompanied by gesturing with her right index finger, indicates 'one' in both the L2 and learners' L1 culture. The repeated explication and gesturing of 'one' signal the corresponding and consistent relationship between the grammatical subject and the actions in 'yibian...yibian...' structure, as it is used particularly to describe the simultaneity of two actions conducted by the same subject. In line 19, while emphasising the meaning of 'two', T1 gestures with both hands showing 'two', combining the lexical equivalent 'liang ge shi(two things)' as well as the prosodic stresses.

T1 delicately combines the prosodic stress, hand gestures and linguistic structures to visualise and emphasise the core grammatical meaning of the pattern, which is also the knowledge gap in learners' repertoires as both learners show in the ongoing conversation. After the embodied explication is provided through gesture-speech alignment, S2 asks for clarification (line 23). She also gestures with her left index finger to visualise the meaning of 'one', which aligns with her speech. At this moment, S2 immediately imitates T1's previous gestures in teacher monologue, which is an evidence of that the learner imitating teacher's gestures for learning and development (Smotrova and Lantolf, 2013). While S2 is seeking confirmation from T1, S1 attentively engages in the conversation without contributing verbally (see screenshot in line 23). S2's imitation of gestures and discussion with T1, affords more learning opportunities to enhance the effect of the previous explication of the linguistic structure for S1. Since T1 confirms S2's clarification request, in the subsequent interaction (lines 25 and 26), both learners use the affective markers (Donato, 1994) 'oh:' to demonstrate their understanding.

T1's deliberate alignment of the linguistic, non-linguistic and embodied resources imagistically visualises the concepts embedded in the target grammatical construction, meanwhile, contrasts them with the learners' conceptualisations. Thus compared to speech-only and speech-prosody instructional explanation, effective use of speech-prosodic-gesture alignment provides rich affordances for S1 to improve his understanding of the linguistic knowledge and structure. Although S1 only verbally shows the acceptance of the explanation, these rich affordances open learning spaces for his potential micro-development.

In Excerpt 4.15, the gesture-speech alignment in teacher instruction effectively assists learners' understanding. In the next example, a different picture of gesture-speech alignment will be presented to reveal a case that gesture-speech alignment is ineffective in explicating the L2 knowledge.

In the recorded four weeks' classroom interaction, it is found that there are more instances of gesture-speech alignment in teacher talk while explicating the grammatical category of 'past'. The following episode will show how gestures and talk work closely in the teacher's explicating practice, but less efficacy is observed to help to improve S1's understanding within the ZPD. This episode of interaction has been analysed and discussed with the focus on the co-regulation between S1 and T1 in Section 4.2.2 as Excerpt 4.3.1. In this section, the focus will be shifted to affordances in T1's gesture-speech alignment.

The pedagogical focus in this episode is the differences of the perfective aspect marker 'le' and the experiential aspect marker 'guo' (Li and Thompson, 1981)¹⁷. As both markers refer to actions in the past, learners are confusing about the meaning of a group of relevant L2 sentences. In her explanation, T1's utterances are always accompanied and aligned with hand gestures which repeated for several times.

¹⁷ Both 'le' and 'guo' refer to actions that happened in the past, but neither of them is the Mandarin equivalent for English past tense. 'le' usually refers to the action happened and completed in the past, meanwhile, it can be used to describe that the situation has changed. 'guo' in general also indicate actions in the past, but emphasise that it is the speaker's 'experience'. In translation, 'le' and 'guo' in many instances, are used interchangeably, which cause ambiguity and confusion for beginning learners of Chinese.

Excerpt 4.16 (reinforcement class, Day 13, Week 3)

1 T1: xue guo yi nian ehm ni ye keyi shuo xue le
 {study EXP one year you also can say study PER}
 2 yi nian but xue guo yi nian so that's that time
 {one year study EXP one year }
 3 experience↓ yeah↑ ((to S2))((pointing her right palm
 4 to the far side))



{had studied for a year, you can also say 'studied for a year', but 'had studied for a year' }

5 S1: so wo(.)wo xue guo(.) yi nian
 {I I study EXP one year}
 {I had studied for one year }

6 T1: ((nodding))

7 S1: I I studied for a year

8 T1: ((nodding))

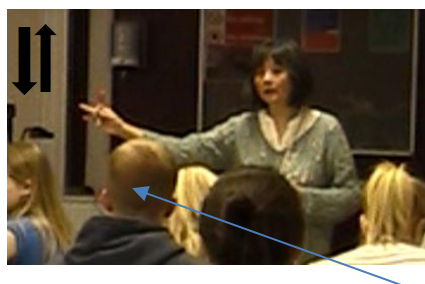
9 S1: and that [doesn't]



10 T1: [that's] before((gesture)) you came to
 (city)=

11 S1: =before you came to (city) but that doesn't imply
 12 anything about whether you(.) have finished that or

13 continuing that in the future
14 (0.6)
15 T1: NO↑ xue guo yi nian that's ehm
{study EXP one year }
{had studied for a year}



16 fi↑ni↑shed ((repeat the same gesture))
17 S1: that's finished
18 S2: cuz it's before=
19 T1: =yeah↑ he has done Chinese for a year in the past
20 S1: ok

In lines 1-4, while T1 is elaborating the similarity and subtle differences of two aspect markers, she stretches her right arm, raises it to the level of her chest, with the palm open and pointing at the far side of the classroom. This gesture metaphorically refers to something away from the speaker. By using this particular gesture, T1 is imagistically treating herself as the starting point, which is 'now', and creates the sense that what under discussion through the speech is located away from 'now'. Her gesture and speech collaboratively embody the meaning indicated by both 'le' and 'guo': the past, which is away from 'now' in time. Meanwhile, this is also a beat gesture, as she vertically moves her palm up and down several times to beat with the rhythms of her speech (see screenshot in line 4). In her speech, the meaning of 'past', 'away from the present' is not conveyed through speech but solely implied by the gesture.

In lines 5-9, S1 attentively asks for confirmation about his understanding of the 'guo' sentence, taking the form of an L1 English translation of the sentence. In line 10, before he

could elaborate his understanding fully, T1 interrupts S1, holds the floor then further explicates that the action happened before S1 came to this city for study. T1 re-produces a similar deictic beat gesture, still with her palm horizontally pointing at the far side of the room. This time, she aligns this gesture with the stressed L1 word ‘before’. The meaning ‘before’ is emphasised through prosody, and embodied metaphorically by this particular gesture. As the negotiation of meaning continues, T1 straightforwardly points out S1’s problematic understanding revealed by his utterance in lines 11-13, indicates that the ‘guo’ sentence refers to the completion of the action. The emphasis is achieved through the rising intonation accompanied past tense verb ‘finished’ (line 16). At this moment, T1 has brought in the same deictic and beat gesture, aligned it with the verb as the explanation.

By now, the two elements which are essential to understand ‘le’ and ‘guo’, first, the completion of the action, which is the status of the action; and second, the time point when the action has taken place, which is in the past; have been elaborated in multimodality. As the past tense verbs already indicate the time of the action linguistically, the gesture embodies the abstract meaning of ‘past, away from the present’ through metaphorically using the space around the speaker. In line 19, while confirming S2’s linguistic contribution with an acknowledgement token, T1 re-explicates the meaning of the ‘guo’ sentence proposed by S1 in lines 5 and 7 by providing its L1 translation, in which the lexical item ‘past’ is accentuated.

Through the analysis of Excerpt 4.16, we can see that gesture-speech alignment plays a pivotal role in explaining and elaborating the grammatical meanings of two related aspect markers ‘le’ and ‘guo’. The teacher employs gestures, prosody and speech to highlight the crucial points for learners to improve and modify their original understanding. In the subsequent interaction, which is omitted here, but analysed in detail in Section 4.2.2 (Excerpt series 4.3.1—4.3.3), S1 and T1 have a lengthy discussion and negotiation of meaning regarding the differences between ‘le’ and ‘guo’. The combination of semiotic resources in this episode of interaction, although rich in nature, and are made available and relevant to learners by the teacher to emphasise the core meanings of the grammatical category, the multimodal explanation seems to cause more confusion for S1 and other learners rather than

facilitating learning.

To be specific, we can see that the first gesture produced in line 4, aligns with the speech that mentions both the similarity and the difference between the two L2 forms. However, the meaning implied by the gesture is their similarity—both indicate actions in the past as well as the completion of actions. While the learners and the teacher are discussing the ‘guo’ sentence, in line 10 and line 16, the same gesture is recurrently produced to align with the speech that clarifies the ‘guo’ sentence. That is to say, in the embodied explanation and instruction, the two grammatical items share the same semiotic resource. T1 keeps utilising the same gesture for both ‘le’ and ‘guo’, even when the speech is emphasising the differences between them. There is a divergence in the emphasising focus between her speech and gesture, which leads to learners’ confusion, as they are not able to tell the subtle differences lie in ‘le’ and ‘guo’ through the affordances embodied by the recurrent gesture. The divergence confuses the learner, later it leads to the co-regulation processes between S1 and T1 (see the analysis of Excerpt 4.3.1—4.3.3), which takes longer and more affordances for T1 to clarify the issue.

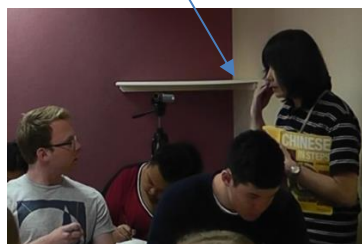
In the next example, the pedagogical focus is the meaning and use of the adverb ‘you’, which indicates the second repetition of an action or a status, usually refers to an action in the past. Contrast to ‘you’, there is another adverb ‘zai’ in Mandarin Chinese, also indicates the second repetition of an action or a status, but refers to the action in the future. This difference between this pair of adverbs stays as the reason for learners’ confusion. In Excerpt 4.17.1, the transcript is taken from the data recorded in the reading and writing class in Week 3. The activity S1 engages in is to rewrite a dialogue in the textbook as a short passage, meanwhile, incorporates grammatical and lexical items introduced during the whole semester. When S1 invites T1 to evaluate his L2 sentence, T1 deploys both linguistic and embodied resources to elaborate on the rationale of the correct linguistic choice.

Excerpt 4.17.1 (reading and writing class, Day 15, Week 3)

1 S1: ehm can I check(...) can I check if it's correct so(...)

2 in this bit I saying thats(...)ehm: Xiaoli ehm plans to
3 go to Europe to the European continent ehm(0.8) he's
4 already been oh she sorry sh- she(...) sor- she's
5 already been ehm but she wants to go again↑ does that
6 make sense↑ ((pointing at his own work on a notebook))

7 T1: ehm you qu means he went((pointing backwards)) he
 {again go}
 {went again}



8 or she went again

9 S1: ok

10 T1: If it's ehm go again is (0.6)again↑ is another word↑

11 S1: oh(...) you

 {again}



12 T1: °no° you means something happened happened ((pointing
 backwards))

 {again}

13 S1: oh: okay

It can be inferred from S1's initiation of the clarification request and T1's response from lines 1-7, that S1 chooses the adverb 'you' to express the meaning of 'again' in describing future actions (she wants to go again↑), while the more appropriate lexical choice should be 'zai'. T1 does not explicitly point out the problem, but semantically corresponds 'you qu

(went again)' with English simple past tense 'went' (line 7), in result implicitly evaluates S1's lexical choice as incorrect. When she emphasises the meaning, the prosodic emphasis combines with a gesture, pointing backwards over her shoulder. This gesture imagistically implies what is being talked about is 'behind', similar to the instances depicted in Excerpt 4.16. T1 spatially treats herself as 'now', thus what happened in the past is located behind. The meaning embodied by her gesture aligns with her linguistic choice 'went'. In this sense, the gesture along with speech provides rich affordances for S1 to grasp the meaning of the linguistic item under discussion.

In line 10, T1 has moved to explicitly inform S1 that another lexical choice will be more suitable for his intended meaning. T1's assistance does not elicit the expected answer, as S1 still provides 'you' as the choice. As a result, with the explicit negative feedback with a lower volume (°no°, line 12), T1 elaborates the grammatical meaning of 'you' through the repetition and prosodic stress of the past tense (happened happened). The explanation and emphasis are also accompanied by the same gesture pointing backwards over her shoulder (see screenshot in line 12), enhancing the semantic and grammatical meaning of 'past'. With the repeated explanation, S1 responds with an elongated 'oh:' which suggests his changing understanding about T1's assistance and the meaning of 'you'. Although in the subsequent instruction, S1 takes more effort to make the correct lexical choice with further prompts and help from T1, the multimodal affordances provided by the teacher enhances and contributes to S1's L2 learning.

Compared to the gesture-speech alignment which causes confusion to learners' understanding in the previous example, the gesture-speech alignment in this example precisely emphasises the meaning of the target linguistic item. The teacher does not bring in the expected adverb 'zai' in her explanation, instead, she only points out the trouble source and mediates S1 about the meaning of the trouble source through gesture-speech alignment. Hence, without causing S1's confusion, the mediation provides more information and perception for S1's L2 problem. With the rich affordances and mediation provided here through semiotic resources, and S1 displays improvement of his understanding about 'you' in later interaction, which is

documented in Excerpt 4.17.2 (15 seconds after Excerpt 4.17.1). In this episode, when T1 brings back the topic of ‘went again’, S1 is able to choose the correct adverb with only one teacher L1 prompt (went again↑, line 30).

Excerpt 4.17.2 (reading and writing class, Day 15, Week 3)

- 28 T1: =yinwei ehm:(0.8) ta: qiannian
{because she the year before last}
- 29 the year before last↑
- 30 qu guo le qunian last year↑ she went again↑ qunian
{go EXP PER last year last year}
{because she had gone there the year before last, she went
there again last year}
- 31 S1: ehm(0.7) eh (...) you
{again}
- 32 T1: you what↓
{again}
- 33 S1: ehm you qu
{again go}
{went again}

4.6 Summary

In this chapter, the classroom interaction data and the analysis presented depict how the mediation is provided by the teachers in the classroom interaction through a variety of mediational resources. The analysis of the mediational function of classroom interaction, revealed through the scrutiny of the social practices of scaffolding (Wood et al., 1976; Michell and Sharpe, 2005) in task-oriented activities; co-regulation (van Compernelle 2015; Guerrero and Villamil, 2000), which focuses on the dialectic relationships between teachers and learners in the classroom; and from an ecological perspective, the concept of affordance (van Lier, 2000) that connects the learners with the environment within which a range of learning opportunities are made available. From the sociocultural perspective, L1 is seen as an

indispensable semiotic resource which mediates L2 learning and development. In Section 4.4, the mediational functions of L1 English at the interpsychological plane as well as the intrapsychological plane have been analysed.

In addition to the verbal medium which provides linguistic mediation for S1's language learning, as a vital dimension of human interaction, gestures function in enhancing learners' L2 understanding (Kendon, 2000, 2004, McCafferty, 2002, 2004; Negueruela and Lantolf, 2008; Hudson, 2011). In this chapter, special attention has been put on the teacher's gestures which align with her speech. The results show that gestures supply another layer of affordances in the classroom context to facilitate learner's understanding. When the meanings conveyed through gestures match that of the speech, gestures, prosody and speech collaboratively intertwine with one another, effectively transform the focal learner's L2 development.

Chapter 5. The examples of L2 micro-development of the learner

5.1 Introduction

In this chapter, the analysis of classroom data will show several examples of S1's learning, which draw trajectories of his L2 microgenesis (Vygotsky, 1978; Lantolf and Thorne, 2006)—development at a micro level. By examining the learner's L2 micro-development of particular linguistic items as well as the gradual change in learner's language choices in mediation-initiating utterances, the analysis demonstrates in detail how the mediation distributed between the teacher and the learner leads to micro-development.

Section 5.2 focuses on S1's appropriation of the noun 'shui (tax)' in unplanned vocabulary explanation. Section 5.3 describes the micro-trajectory of the learning of the adverbial structure 'you...you... (both ...and...)'. Section 5.4 displays how S1 activates his L2 existing knowledge to make progress in appropriating the position of the locative phrase 'zai...' in the sentence, which deepens his understanding of the category of word order in the L2. In section 5.5, from both S1 and the teacher's perspectives, the analysis draws S1's micro-trajectory of the change of language choices in mediation-initiating conversations.

5.2 The micro-development of lexis—the learning of 'shui'

Taking the learning of the noun 'shui (tax)' in Week 1's oral class as an example, the analysis of data in this section will reveal how S1's mastery of the particular noun emerges in the unplanned vocabulary explanation through the classroom interaction.

The topic of the small group discussion is what people do in cafés. Before the learners start the conversation, T1 has introduced the topic of 'café' and gives the instruction for the task. In the subsequent interaction, T1 joins S1's group (S1, S2 and S3), but chooses to listen to their L2 conversation until S1 encounters the problem in a word search for the noun 'shui (tax)' which they are not able to solve without teacher intervention. The target form 'shui (tax)' is neither in the teacher's pedagogical plan nor in the teaching syllabus. The problem emerges from the peer interaction then becomes the focus for mediation. We already see this episode of interaction in the last chapter while analysing S1's private speech (see Chapter 4, Section

4.4.2), now we will look at the same episode to observe how his control on the unplanned L2 noun 'shui (tax)' develops with assistance at a micro level.

Excerpt 5.1(oral class, Day 5, Week 1)

- 1 S3: ni ne?
{you SFP?}
{what about you?}
- 2 S1: ehm(.)wo bu xihuan ehm XingBaKe yinwei: tamen:ehm bu
{I N1 like Starbucks because they N1}
3 eh:(0.8)eh:(...) eh:bu ah:° >how to how to < how to
4 explain°
{N1}
- 5 tamen bu gei(.)ehm(.)yingguo(.)qian↑
{they N1 give the UK money↑}
{I don't like Starbucks because they don't don't give
money to the UK}
- 6 (2.5)
- 7 S2: °I don't [(know)°]
- 8 S1: [They] don't pay tax
((4 lines of learner interaction omitted))
- 13 T1: tamen bu gei shui↓
{they N1 give tax↓}
{they don't pay tax}
- 14 S2: oh:↑
- 15 S1: tamen bu gei shui↓
{they don't pay tax}
- 16 T1: Ok [°hao°]
{good}

S1 responds to S3 that he does not like Starbucks, and tries to provide the rationale in the L2

(lines 2-5). He smoothly forms his first clause but encounters a problem while forming the second one, which is evident in his hesitations and pauses in line 3 (eh: (0.8) eh: (...) eh:bu ah:) as well as his private speech “°>how to how to< how to explain°”. These interactional moves hold the floor for him during the multi-party talk to do the word-search for the noun ‘shui (tax)’, as revealed in the later explanation in line 8 ([They] don’t pay tax). He uses an interactional strategy that replacing the un-acquired lexical item ‘shui (tax)’ with a more general but acquired lexical choice ‘qian (money)’. The 2.5-second silence indicates that the replacement of the vocabulary does not convey his meaning precisely as expected. Therefore, S2 responds overtly that she does not know, although in a lower volume.

Until this moment, the learner discussion is not sufficient to provide more affordances for S1 to find the suitable noun ‘shui (tax)’, consequently, T1 has made the choice to intervene (line 13). T1 recasts his L2 sentence in line 5 according to his L1 explanation. The recast replaces ‘qian (money)’ with the more precise ‘shui (tax)’. The verb ‘gei (to give)’ and the trouble source ‘shui (tax)’ are accentuated in her recast, which combines with a falling intonation in general (tamen bu gei shui ↓). S1 chooses to imitate the modelling sentence, moreover, it is worth noticing that the stressed ‘shui (tax)’ and falling intonation are also imitated (line 15). Except for the imitation, S1 does not show more evidence of appropriation at this particular moment.

In the subsequent interaction which immediately follows Excerpt 5.1, based on S1’s opinion on Starbucks, T1 tries to prompt the learners to produce an L2 sentence for the meaning ‘I never go to Starbucks because it does not pay tax to the UK’. However, the learners encounter a problem in producing the L2 equivalent of ‘never’—‘conglai’. Accordingly, T1 shifts the pedagogical focus to assist them about ‘conglai’ (the transcript is not presented here). After the discussion of ‘conglai’ finishes, she has shifted the focus back to the meaning of ‘because Starbucks does not pay tax to the UK government’. Approximately 50 seconds after Excerpt 5.1, in order to remind the learners to re-focus their attention to the original L1 sentence ‘because Starbucks does not pay tax to the UK’, in Excerpt 5.2, T1 models the following sentence, in which the previous trouble source ‘shui (tax)’ is prosodically stressed (line 46)

and the negative construction ‘bu gei shui’ is repeated (line 47).

Excerpt 5.2 (oral class, Day 5, Week 1)

46 T1: ah yinwei XingBab- XingBaKe bu gei yingguo(.)shui↓
{because Starbucks Starbucks N1 give the UK tax}
{because Starbucks Starbucks don't pay tax to the UK}
47 yeah↑ (.)bu gei shui↓
{N1 give tax}
{don't pay tax}

Her modelling and stresses echo that of Excerpt 5.1. In the continuing interaction in Excerpt 5.3, which happens around 30 seconds later in the peer interaction while T1 has moved to join other groups, S1 becomes able to use the newly acquired noun in a new conversation independently, although with some uncertainty.

Excerpt 5.3 (oral class, Day 5, Week 1)

59 S1: ehm(...)ehm(...)wo ehm(.)ehm:*qu:* wo:*qu* ehm(.)Caffe Nero↑
{I go I go}
{I go to Caffe Nero }
60 S2: oh↑ okay [is that] good↓
61 S1: [ehm]
62 S2: hum↑
63 S1: ah dui
{correct}
64 S2: ah
65 S1: yinwei tamen(.) uhm gei yingguo(.)uhm(.)shui↑
{because they give the UK tax }
{because they pay tax to the UK}
66 S2: um hum em
67 S1: ehm

In line 65, S1 provides the reason for his choice of going to Caffe Nero is that they pay tax to the UK government. His L2 sentence is smooth, although with short pauses, there is no noticeable hesitation and long pauses. He incorporates the newly introduced noun 'shui (tax)' into his new L2 sentence independently without the assistance from neither the peer learners nor the teacher. In this L2 sentence, 'shui (tax)' as T1's modelling does in Excerpt 5.1 and 5.2, is also stressed by S1, which can be seen as the evidence that while appropriating the L2 linguistic form, the learner appropriates teacher's paralinguistic means as well for L2 learning (van Compernelle, 2015). His sentence is not a mere reduplication of the teacher's modelling and recast. The teacher's modelling 'bu gei shui (do not pay tax)' is a negative form, in S1's sentence, he creatively recycles the linguistic form in a new context with its affirmative form 'gei shui (pay tax)'.

From an SCT view, this is considered the kind of creative imitation which leads to development (Vygotsky, 1987; Tomasello, 2003, 1999). Although his rising intonation indicates that S1 is not entirely confident in the L2 product, thus he seeks confirmation from other interlocutors on its correctness and appropriateness. It also illustrates that at least at some extent, S1 demonstrates L2 microgenesis on the lexical meaning and use of the L2 noun 'shui (tax)' as well as its collocation verb 'gei (to give)'. He has made the qualitative changes from not knowing the lexical item, to the state of not only understanding the semantic meaning of the noun, but also being able to use the noun appropriately and independently according to his own intended meaning in different linguistic structures.

S1's creative imitation is the indicator that the learner is gaining the conscious control of the linguistic form and use the form to regulate his interactional behaviour to express his opinion. The learning of 'shui' is emergent in the classroom interaction through the assistance provided by the teacher. By recast, modelling, with the L2 and paralinguistic resources such as prosodic stresses, T1 has effectively assisted the learner to move within his ZPD from 'unable' to 'able'. This is a typical example of what Vygotskian and sociocultural researchers (Vygotsky, 1978, 1999; Lantolf and Thorne, 2006) called as 'microgenesis'—that the development at the

micro level, even within seconds' or minutes' time.

5.3 The micro-development of fixed grammatical structure –the learning of 'you...you...'

In Section 5.2, we have seen the example of S1's micro-development of the noun 'shui (tax)'. In this section, I will present how S1 appropriates a fixed adverbial grammatical structure 'you...you...' which can be roughly treated as the equivalent of 'both...and...' in English at the beginner level. The adverb 'you (again, also)' grammatically indicates the repetition of actions or status. When two 'you' combines as a structure, its grammatical meaning is the accumulation and simultaneity of actions, abilities or status. For the word order in this adverbial structure, both 'you' should precede the main verbs as 'S + you +V+O, you +V+O'. If the particular sentence involves the auxiliary verb, 'you' should precede both the auxiliary verb and the main verb. In the interaction from Week 4 below, the position and the grammatical connotation of 'you...you' structure is the focus of the mediation, which is initiated by S1.

Excerpt 5.4 (translation exercise class, Day 19, Week 4)

- 1 S1: can you(.) put the you ehm(...)after the verb [so so]
{again}
- 2 S2: [Yeah I
3 wanna]ask
- 4 S1: ta ehm ta sh-ta shuo ehm you(.)riwen(.) you zhongwen*
{he he he speak again Japanese again Chinese}
{he he he speaks both Japanese and Chinese*}
- 5 T1: [ta:first↑ you]is adverb you don't put adverb before
{again}
- 6 a noun(0.7)and anything↑ after your transitive ver↑b is
7 the object so:(...)he speak you(0.8)as well
{again}
- 8 S1: [ta hui shuo]

{he can speak}
 9 S1: ok(.) right so you can't(0.7) ok
 10 (1.0)((writing on his notebook))
 11 S1: ta(.)you((keep writing on the notebook))
{he again}
 12 T1: <ta you hui shuo zhongwen you hui shuo riwen>
{he again can speak Chinese again can speak Japanese}
{he can speak both Chinese and Japanese}

By initiating the assistance, S1 invites the teacher to evaluate his L2 understanding, meanwhile, testifies his hypothesis of the position of 'you' in the sentence¹⁸. He posits 'you' structure after the main verb 'shuo (to speak)' and before the noun objects, as elaborated in his example sentence (line 4). It seems that S1 is influenced by his L1, as he is treating the structure as an equivalent of 'both...and...' in both semantic meaning and structural use. T1 responds with the metalinguistic explanation in L1 with some stresses on grammatical terminology (lines 5-7). While S1 is verbally accepting T1's explanation and taking note (lines 9-11), T1 reformulates his previous L2 sentence in the correct sentence order at a slower tempo (line 12).

In Excerpt 5.4, with the L1 explanation and modelling from the teacher, S1 verbally indicates that he understands the problem. In the next excerpt, the interaction happens a few seconds later, S1 has extended the enquiry to whether the pattern requires the repetition of the action verb in the second clause. His understanding of the structure develops from the position of the structure to the agreement required between grammatical components in particular sentences.

Excerpt 5.5 (translation exercise class, Day 19, Week 4)

19 T1: so both these ↑ he can↑ he can: also(0.7) can [do another]
 20 S1: [do you have]
 21 to(.) when you're speaking do you have to repeat((looking

¹⁸ In Mandarin Chinese, the adverb precedes the verb in the sentence as its modifier.

58 SS: ([ta you shuo zhongwen] you shuo)
 {he again speak Chinese again speak}
 {he speaks both Chinese and ...}

59 S1: ta you shuo zhongwen you shuo
 {he again speak Chinese again speak}
 {he speaks both Chinese and ...}

60 T1: <ta you shuo zhongwen you shuo riwen>
 {he again speak Chinese again speak Japanese}
 {he speaks both Chinese and Japanese}

61 S1: ok

62 T1: he spea↑ks both the languages(1.0)hui means he can↓
 {can}

63 speak(1.2)wo de di'er ge((gesture 'two'))juzi mei you
 { I POS second M sentence N2 have}
 {my second sentence doesn't have (that)}

64 he is able to he knows how to↑ just he: spea↑ks both↑ the
 65 languages

In the previous interaction, T1 has assisted the learners to understand the position of ‘you’ in the sentence ‘he can speak both Chinese and Japanese’, which emphasises the semantic meaning of ‘able to’ by incorporating the auxiliary verb ‘hui (can/be able to)’. Follows the interaction in Excerpt 5.6, T1 pushes the learners to use the pattern to convey a slightly different semantic meaning, that without emphasising ‘can’ but only states the person speaks two languages. As T1 already mediates the learners on how to emphasise ‘can’ in the structure, now she is building the instruction in their new, modified ZPDs to push them to recycle and re-organise the L2 form for a higher developmental level.

In line 48, the discourse marker ‘°ok°’ in a lower volume closes the last discussion (Fung and Carter, 2007). T1 provides the L1 meaning to push learners to produce a new ‘you...you...’ sentence. She repeats the L1 sentence twice, meanwhile, emphasising ‘both’ through prosody.

For both L1 prompts, she gives the learners long wait time (1.5 seconds) and DIUs (τα, τα:) (lines 48, 49). However, the learners suggest an unfavourable answer which immediately evaluated by T1 as incorrect. Instead of providing the answer, T1 once again explains the unfavourable sentence in the L1 (lines 51-52). With no response elicited, T1 initiates a third repetition of the L1 prompt (line 54). S4's contribution, which still includes the auxiliary verb 'hui (can/be able to)' was evaluated as incorrect by T1 immediately (line 56).

At this moment, in the L1, S1 has suggested his own version—to take 'hui' out, and asks for clarification. He does not wait for the teacher to give any feedback, but uses the same strategy in this series— producing a modified L2 sentence, which is overlapped with other learners' contribution (lines 57-59). T1 repeats his sentence at a slower pace as confirmation. In her repetition, the key lexical item 'you' is accentuated twice (line 60). In addition to the repetition, T1 explains and contrasts the rationale of the changes in the new sentence in both L1 and L2, which meanwhile highlights the differences in meanings between the two sentences.

Through this series of interactional episodes extracted from Week 4's teaching, we can draw a trajectory of S1's understanding of the adverbial structure 'you...you...'. At the beginning, in Excerpt 5.4, S1 knows the semantic and grammatical meaning of the pattern, but does not have sufficient knowledge of its word order. As a result, he initiates the mediation to testify his hypothesis of the linguistic form. T1's metalinguistic explanation has solved this L2 problem. In Excerpt 5.5, S1 intends to initiate mediation to ask the teacher to clarify about the repetition of verbs in this pattern, but T1 chooses not to respond to S1 while engaging with other learners for the discussion of the similar issue. This triggers S1 to make another initiation of mediation sequence. By initiating assistance again, in Excerpt 5.6, S1's understanding of the pattern changes from the position of the key adverb to a deeper level about the collocation and grammatical agreement between structural components of the sentence. T1 assists him with the explanation about the emphasis of the sentence. In the last episode, while T1 is testing learners' ability in recycling the linguistic forms, S1 is able to produce a correct sentence, moreover, he understands the underlying rationale of its use. His

performance in Excerpt 5.7 shows that as an active learner, S1 makes use of the assistance and a range of affordances made available during the interaction in the classroom, improves his own understanding of the linguistic pattern in different aspects.

5.4 The micro-development of L2 concept –the learning of Mandarin word order

In the previous sections, we have witnessed the learner’s micro-development on the L2 noun ‘shui (tax)’ and a fixed grammatical structure ‘you...you... (both... and...)’. In this section, the analysis moves from the learning of particular grammatical structures to the learning of an important aspect of the L2: the concept of word order in Mandarin Chinese.

As Mandarin Chinese is defined as an isolated language and lacks the grammatical categories such as tense, number, and case, the word order has become a vital device for Mandarin Chinese to embody those grammatical categories in meaning-making (Li and Thompson, 1981; Yip and Rimmington, 2004). Learners who have little or no experience in learning the isolated languages usually encounter problems when dealing with these unfamiliar concepts and categories. There are several instances observed regarding the processing of word order in S1’s learning activities across two months’ instruction. In the following series of classroom interaction, taking the learning of the position of the locative phrase ‘zai...’ as an example, the data reveals that with the mediation afforded by both the teacher and peer learners in the classroom, the learner’s control of the concept of word order and topic prominence¹⁹ gradually emerge.

The data is extracted from the oral class in Week 1. S1’s small group has been engaging in the discussion of cafés in the UK. Part of the data presented in the following Excerpt 5.8 and 5.9 have been discussed as Excerpt 4.5 in Section 4.3 as the example of affordances in the classroom. In this section, the analysis of the classroom data focuses more on how the affordances are interconnected in the classroom to mediate learning.

¹⁹ Topic prominence is one of the most striking features of Mandarin syntax. In Mandarin Chinese, the topic always comes first in the sentence, and the topic usually refers to speakers’ shared knowledge. The concept of topic prominence is crucial in understanding sentence structure, on the contrary, the concept of subject is less significant in Mandarin Chinese (Li and Thompson, 1981).

{not good}

116 S2: I don't-I forgot what you said

117 S1: I said I like(.)I buy some uhm:buy some=

118 S2: =and what did you say in Chinese

119 S1: uhm wo xihuan(.) ehm: ehm yibian uhm

{I like (while) }

120 he kaifei yibian(.) kanshu

{drink coffee (while) reading}

{having coffee while reading}

121 and then I said zai(...) Caffè

{EXT 'at'}

122 S2: ehm that should come=

123 S1: =that should be [before]

124 S2: [yeah]

125 S1: wo uhm zai Caffè Nero wo xihuan

{I EXT I like}

{I'm in Caffè Nero I like}

In line 114, T1 specifically points out the problem by posing a display question. This display question explicitly marks a critical feature of learning for the group, draws their attention to the problem. Through directing the display question towards S2, T1 brings other learners into the discussion. Her mediational move provokes all the learners, not only S1, to think further about the L2 problem, thus extends the learning opportunity of benefiting a particular learner to collaborative knowledge building. S1's immediate reply in the following line reveals his self-consciousness about the L2. T1's display question also initiates a peer mediation sequence.

Follows the teacher's direction, S2 makes a clarification request to S1 (line 116), to which S1 chooses to explain in L1 English instead of repeating the L2 sentence. S2 interrupts his utterance then requests him to elaborate the meaning in the L2 (line 118). When she detects

the L2 problem, as S1 puts the locative phrase ‘zai Caffe’ at the end of the sentence (line 121), she immediately points out the problem. Her explanation (line 122) is interrupted and latched by S1’s utterance (line 123) before she could clarify the L2 problem completely. With the latched speech, S1 provides an explanation by himself. It can be observed that his explanation is again overlapped with S2’s acknowledgement token ‘yeah’ in line 124.

The instances of overlaps and latched speech, vividly demonstrate that S1 and S2 are orienting to the same learning object and utilising their shared knowledge during the discussion of the concept of word order in peer mediation sequence. As it is also evident in the overlapped and latched speech from lines 122-124, before S2 could finish her explanation, S1 voluntarily provides the explanation. This self-awareness indicates that the knowledge about the position of the adverbial locative phrase is already in place in his L2 repertoire, but he is not able to apply the knowledge consciously in actual language use in the context. In line 125, as a result of the peer mediation, S1 tries to form the L2 sentence in the correct way—putting the adverbial locative phrase before the main clause.

In Excerpt 5.8, S1 independently produces an L2 sentence which suggests a glimpse of his current L2 ZPD, shows his L2 ability while no assistance is provided. Compared to that, in Excerpt 5.9, with T1’s prompt and S2’s peer mediation which is also motivated through T1’s interactional move, S1 is able to locate the L2 problem and employ the existing but inactive L2 knowledge to extend his understanding of the word order involves the adverbial locative phrase. This phenomenon suggests that although the knowledge of the word order is known to him, his L2 performance still relies on other’s assistance to externalise the relevant L2 knowledge. Therefore, S1 is in the developmental process from other-regulation to self-regulation. In these two excerpts, based on the ZPD revealed by L2 performance, the language teacher provides contingent mediation for S1’s L2 understanding and learning. The following excerpt documents how T1 reinforces S1’s ownership of the L2 concept of word order.

Excerpt 5.10 (oral class, Day 5, Week 1)

126 T1: wo zai: Kafei Nero xihuan de yisi shi:

in the L2, the coverb ‘zai’ which indicates the location is accentuated, along with the elongated vowel ‘shi:’. The information follows ‘shi:’ is then foregrounded for S1. In line 127, T1 code-switches to L1 English to further elaborates the meaning of S1’s sentence. After the explanation and elaboration about the new sentence, she uses an elongated L2 first personal pronoun ‘wo:’ to prompt S1 to provide a full sentence.

The feature of topic prominence determines the existence of the semantic difference between S1’s intended meaning ‘zai Caffe Nero, wo xihuan... (I like... at Caffe Nero.)’ and his reformulated sentence ‘Wo zai Caffe Nero xihuan... (At Caffe Nero (only), I like...). This difference is not the original teaching/learning agenda, but emerges and becomes visible from the particular interactional and mediational process. The importance of topic prominence in the L2 and the change of meaning in the reformulated sentence, trigger T1 to address this emerging issue. Hence she contingently mediates the learners with explicit elaboration which is closely related to S1’s changed L2 performance.

In line 128, the 0.8-second wait time is given but elicits no response. At this moment, T1 makes further moves to explicitly provide more metalinguistic information on the word order in L1 English (line 129). The wait time, metalinguistic explanation and DIU only receive the acknowledgement token ‘okay’. In line 132, an elongated DIU ‘wo xihuan:’ produced by T1, aims to elicit the whole modified sentence. With several prompts, explanation, DIUs and code-switches between the L1 and L2, after a short pause in line 133, S2 starts to form the expected L2 sentence which begins with the adverbial locative phrase. S1 follows S2, with an overlap, produces the expected sentence which is grammatically correct and appropriate.

These three excerpts reveal that how T1 and the peer learner scaffold and assist S1 to

‘I like doing this only at Caffe Nero’ which is subtly different with the expected sentence starts with the locative phrase ‘zai Caffe Nero’, which simply indicates the location of the action. For L1 Chinese speakers, the subtle difference between the two sentences is easy to understand, and it involves the feature of topic prominence. In the former sentence starts with ‘wo (I)’, since ‘wo xihuan (I like)’ is at the sentence-initial position, ‘what I like (in this place)’ is the topic. While in the latter one, which starts with the ‘zai’ structure, the topic is the location, for here, the topic is Caffe Nero. However, for L2 Chinese beginners, it might be difficult to conceive the difference since their L2 concept of topic prominence might not be well established yet.

appropriate the concept of word order when the adverbial locative structure ‘zai +location’ is involved in the sentence. In Excerpt 5.11, T1 summarises and generalises the characteristics and features of the structure beyond the particular sentence.

Excerpt 5.11 (oral class, Day 5, Week 1)

- 136 T1: yeah↓ suoyi zai kafei Nero ehm(.) zuo shenme shi
 {so EXT Caffe do what thing}
- 137 ni xihuan de shi
 {you like MOD thing}
 {so in Caffe Nero, what (do you)do, the things you
 like}
- 138 S1: ah hao
 {alright}
- 139 T1: wo xihuan: zai shenme defang zuo shenme shi
 {I like EXT what place do what thing}
 {I like doing something at somewhere}
- 140 S1: um↑ hum
- 141 T1: henhao uhm
 {very good}
- 142 S1: xiexie
 {thanks}

In her summary, T1 first acknowledges the correctness and appropriateness of S1’s modified sentence, then generalises the structure in the L2. She emphasises the structure’s semantic meaning, extends it to transcend the particular sentence regarding Caffe Nero (line 139). Her summary elaborates the general organisation of the adverbial locative structure, instructs the learners that the same structure can be extended to the general description of doing things in different locations. The summary and extended knowledge push the learners to inductively use it in different contexts. At the end of this series, S1 accepts T1’s mediation (lines 140,142) with receipt tokens but does not try to explore or expand the pattern in a different scenario.

This episode of interaction shows that after solving the L2 problem in the particular sentence, a new ZPD is formed. Thus building on the new ZPD, T1 consciously tries to push the learner to transcend the current developmental level, to form the generalisation about the word order in the L2.

The series of excerpts in this section demonstrate how S1's learning experience is mediated through a variety of linguistic and interactional resources. The mediational resources are L2 learned structures, L1 metalinguistic explanations, DIUs, wait time, as well as the paralinguistic emphasis. Through the utilisation of the aforementioned mediational resources in classroom interaction, based on the information revealed by learners' ZPDs, T1 deliberately and strategically deploys and changes the ways to mediate learning. For S1, he is able to contingently respond and pick up the resources and affordances made available and relevant in the interaction.

The learning of the concept of word order presented in this section is an example of microgenesis which depicts S1's development from incapable to capable of mastering a specific linguistic item and structure in a few minutes in an interaction-focused discussion activity. In the first excerpt in this series, S1 mistakenly places the locative phrase as the last component of the sentence, which echoes with his L1 English. Accordingly, in the following interaction, using the assistance and affordances provided during the classroom interaction with both the teacher and the peer, S1 has become able to identify the trouble source and activates his residing knowledge about the L2 grammatical concept, which leads to his modified understanding and improved L2 performance (Excerpt 5.9, line 125). This improved performance is a new ZPD, and a more sophisticated L2 problem emerges from the new ZPD, within which the teacher skillfully and contingently provides assistance to further expand S1's understanding of the particular L2 concepts (Excerpt 5.10 and 5.11). The learner's changing L2 performance in this episode also shows how learner agency (Waring, 2011; Ahn, 2016) works in picking up and recycling the assistance and affordances in the interaction with the expert and more capable peer, which effectively enhances his appropriation of the typological category of word order and topic prominence in Mandarin Chinese.

5.5 The micro-development of L2 interactional competence –the learning of ‘zenme shuo...’

The examples of the L2 micro-development of S1 in the learning of vocabulary, the grammatical structure as well as the concept of word order have been presented in the previous sections. In this section, the object of observation and analysis is slightly different. I shift from observing the development of particular linguistic components, to tracking how the focal learner S1 solicits help in word-search and clarification request activities. The finding shows that in S1’s classroom activities, when he is not able to find a solution on his own, he recruits other interlocutors’ help, by using the L1 linguistic structure ‘how (would) you say.../could you say...’. Draws on affordances in classroom interaction, he gradually changes his linguistic choice from the L1 structure to its L2 equivalent ‘zen me shuo...’. The data depicts a micro-developmental trajectory for his change and elucidates how the affordances in classroom interaction work as ‘multisemiotic toolbox’ (Pekarek Doehler, 2018) for this change.

The Mandarin demonstrative pronoun ‘zenme (how)’ often collocates with a range of verbs, to be used to ask questions about methods and approaches of conducting actions. The grammatical structure ‘zenme +verb’ is a high-frequency structure. It is usually introduced at the very beginning in L2 Mandarin Chinese courses and translated as ‘how to’ in different Mandarin textbooks (Zhang, Li and Suen, 2012). It is observed throughout the classroom data in this research project, on the one hand, the teacher T1 has utilised the specific L2 structure ‘zenme shuo (how to say/how do you say)’ to elicit L2 linguistic forms from the learners during instruction. On the other hand, the learners, including S1, have been using the same structure to solicit help for their word-searches and clarification requests as well.

The teacher has consistently and exclusively employed the structure in the L2, while the focal learner S1 has undergone a change from relying on the L1 equivalent ‘how (would) you say.../could you say...’ to the L2 structure ‘zenme shuo’. T1’s use of the particular structure is routinised in this classroom, as an effective device to elicit learners’ responses. In addition,

her frequent, routinised use of the structure in different types of classes in this CFL context, affords L2 exposure for learners, consequently benefit the learner’s micro-development of emerging L2 interactional competence (see Hall and Pekarek Doehler, 2011; Young, 2013) as he starts to use the structure as an interactional device for soliciting help. S1’s development of ‘zenme shuo’ also stands as an example of incidental learning (Hulstijn, 1989, 2003).

In the following sections, through the presentation of the classroom data, first, the instances that S1 has used the L1 structure to solicit help for word-searches and clarification requests will be presented; then the data will show his change of linguistic choice from L1 to L2 structure ‘zenme shuo...’ in Week 4. Second, the teacher’s instances of using the L2 structure for elicitation will be demonstrated to elucidate the affordances in T1’s language use which contribute to S1’s micro-development across two months’ learning.

5.5.1 S1’s development: From ‘how (would) you say.../could you say...’ to ‘zenme shuo...’

By screening the 24-hour video and audio recordings of the classroom interaction data, the instances that S1 relies on the L1 linguistic pattern ‘how (would) you say.../could you say...’ and its L2 equivalent ‘zenme shuo’ have been identified for further analysis. For S1, during the four weeks’ instruction which across the time span of two months, he initiates assistance by L1 questions to elicit L2 lexical items such as ‘what’s to cook?’, ‘which one is ‘nainai’?’. He also makes clarification requests through the L1 with the questions like ‘if you wanna say ..., ‘do you say...’, ‘do you have to say...’. There are seven instances that he uses ‘how (would) you say...’ or ‘could you say...’ as a device to request for help in word-search from other interlocutor(s). The following transcript has shown how S1 asks for help in the L1 in Week 1’s last session—the oral class.

Except 5. 12 (oral class, Day 5, Week 1)

- 25 S1: je-do you could you say lai↑ or say lai jia
{come} {come home}
- 26 (...)
- 27 S2: I don’t know↓ (...) I think I don’t know↑ (...) lai

In Excerpt 5.12, in line 25, S1 initiates a word-search, in the meantime, which is also a clarification request, tries to elicit the correct L2 lexical form of ‘come home’ from his peer learner S2. Through the question ‘do you could you say’, he makes two suggestions for the linguistic choice, to which S2 chooses one of the two but with uncertainty.

Excerpt 5.13 (oral class, Day 5, Week 1)

- 1 S1: how would you say then(.)was trying to say(1.2) the
 2 the(.) young sisters so the(.) the(.) younger
 3 ehm(...)brother's(.) girlfriend(.) doesn't like coming
 4 to house(.) because the cat doesn't like
 5 S2: okay=
 6 S1: =°doesn't like her°
 7 ehm: ((laughing sound))
 8 S2: so who doesn't like↑ what↓ sorry

A few minutes later, the learners are continuing their pair work, which is documented in Excerpt 5.13. When S1 encounters difficulties in making an L2 sentence (lines 1-4), which requires relatively complex structure for his intended meaning, he incorporates the same L1 grammatical structure ‘how would you say then’ to elicit the construction of the L2 sentence.

In Week 2, S1 has been absent for several teaching sessions. In those sessions that S1 attends, the L2 structure ‘zenme + verb’ has been employed in different circumstances by both T1 and other learners, to which S1 attentively engages in their interaction (the data will be presented in the following Section 5.5.2, while the analytic focus shifts to T1’s use of the structure).

When the university resumes from the Easter break, in Week 3, fewer instances of S1

initiating word-searches has been observed. Instead, S1's initiates more instances of clarification requests following invitations to T1 to evaluate his L2 products and to test his own hypotheses of the language. He engages in the instruction deeper beyond the activity of word-search, but put more effort into understanding grammatical structures and concepts. When the group enters Week 4, in which the pedagogical focus becomes leading learners to review all the linguistic items and structures learned in the whole semester, the activity of word search, along with the interactional moves to initiate it has returned to S1's learning interactional organisation, with a change observed in his language choice, which is shown in the following Excerpt 5.14 (The interaction has already been analysed in Section 4.3 as Excerpt 4.7.1, when the affordances available in the classroom are demonstrated. In this section, the transcript is used as the example for the development of the structure 'zenme shuo...' as an interactional device).

Excerpt 5.14 (revision class, Day 16, Week 4)

- 1 S1: laoshi ↑(1.0) zenme shuo teach(1.4) zenme zenme shuo
 {teacher how say how how say }
 {teacher, how to say'teach'? how how to say'teach'?}
- 2 teach (0.7)
- 3 T1: jiao
 {teach}
- 4 S1: jiao oh
 {teach}
- 5 T1: ehm: yaoshi ni bu hui shuo teach ni keyi shuo I
 { if you N1 can say you can say }
 {if you don't know how to say 'teach', you can say}
- 6 learn Chinese from ↑
- 7 S1: yeah
- 8 (0.7)

In this short exchange in the first revision session in Week 4, S1 initiates help from T1 as he

encounters the problem in finding the appropriate L2 equivalent of ‘to teach’. Compared to his previous similar initiating activities, as showed in Excerpt 5.12 and 5.13, S1 has chosen to request the help exclusively in the L2. The linguistic structure has been changed from the L1 structure ‘how (would) you say.../could you say...’ to the L2 structure ‘zenme shuo...’. In his request, he accentuated the trouble source ‘teach’ to draw T1’s attention. This request has successfully elicited the teacher’s response, which then solves his L2 problem.

In this instructional exchange, the L2 structure ‘zenme shuo...’ is not the learning object. In contrast, as a vital semiotic resource, it serves the mediational function for S1 to elicit crucial linguistic knowledge for the particular L2 development—the equivalent of ‘to teach’. It helps the learner to elicit assistance from the expert while he is not able to solve the problem independently. The L2 structure is the emerging L2 interactional competence of S1. However, as an L2 beginner, S1’s control of the structure as the information requesting device is unstable. In the remainder of Week 4’s classroom interaction, in similar circumstances, S1 returns to the L1 structure ‘how (would) you say.../could you say...’ in a slightly different version, which is presented in the following transcript.

Excerpt 5. 15 (revision oral class, Day 20, Week 4)

- 1 S1: laoshi ↑(0.9)to say↑:eh to go to somewhere how long it
{teacher}
- 2 take it’s(0.8)ehm so translations qu huoche zhan
{go train station}
{go to the train station}
- 3 T1: um hum
- 4 S1: ehm yao:
{need}

In this excerpt extracted from the last session of the data collection, S1 encounters a problem in expressing the meaning of ‘how long does it take...’. In order to gain assistance from T1, S1 makes the request using the L1 structure ‘to say↑:’ which is simplified from ‘how to

say'. He waits for a short pause after he makes the request, then tries to form an L2 sentence for T1's further evaluation.

Through looking at the use of 'how (would) you say.../could you say...', we can see that the structure has been a stable interactional and mediational device for S1 in the activity of eliciting help in the word-searches as well as in making clarification requests to other interlocutors in the classroom. Most of the time, S1 relies on the L1 to fulfil his learning needs. In Week 4, it can be observed that the L2 equivalent of the structure—'zenme shuo...' has been into play. Although the use of this L2 structure is not stable as S1 chooses to shift back to L1 use while conducting the same action later in the week, this interactional behaviour is considered as the emergence of his L2 interactional competence, which is defined as L2 grammar-for-interaction by Pekarek Doehler (2018). In the following section, I will present how the emergence of this L2 interaction competence is embodied and mediated in the interaction between T1 and the learners in this CFL classroom.

5.5.2 T1's recurrent use of 'zenme shuo...' as affordances

Through the scrutiny of the classroom interaction recordings, around 15 instances of the use of the structure 'zenme shuo...' have been found in T1's language when S1 is one of the recipients. It can be seen from the data that the structure 'zenme shuo...' is used as a routinised interactional device for the teacher to elicit expected L2 forms from the learners, from Week 1 to Week 4, in all types of classes that T1 is teaching. The use of the particular structure is also found in the instructional sessions when S1 is absent, and in her interactions with other learners when S1 is not verbally involved.

In the following section, how T1 uses 'zenme shuo...' in classroom instruction, and how her use of the linguistic pattern affects S1's picking up and recycling (Eskildsen, 2012; van Compernelle, 2015) of the pattern will be presented through the analysis of the transcripts.

41 S2: zenme shuo
 {how say }



{how to say}

42 T1: ehm::Baba mama zuof-mama zai zuofan eh baba zai:
 {dad mom cook mom DUR cook dad DUR:}
 {dad mom cook mom is cooking dad is }

Excerpt 5.17 is another example of T1's use of 'zenme shuo...', which happens in the oral class in week 1 when T1 intervenes in S1 and S2's pair work. The learning object in the pair work is the L2 structure 'yibian...yibian... (...while...)' (the focus of analysis in Section 4.5). T1 has explained the grammatical meaning of the structure is to describe the simultaneity of two actions conducted by one person only. S2 extends the discussion to the circumstances that involve two people. S2 intends to use 'zenme shuo...' to elicit T1's instruction, but makes the error about its pronunciation (line 39). In the following turns, T1 models the pronunciation, to which S2 imitates. After that T1 moves the interaction forward to provide a modelling sentence for the situation proposed by S2. From the video screenshot, it can be seen that S1 has been paying close attention to their discussion through eye gaze. S2's use of the particular pattern and the subsequent correction on the pronunciation between S2 and T1, serve as the potential sources and affordances for S1's learning of the pattern.

The next excerpt has been extracted from the transcript collection of the vocabulary class in Week 2. T1's uses 'zenme shuo...' several times while introducing new lexical items, especially in display questions to elicit L2 lexical forms for L1 equivalents.

Excerpt 5.18 (vocabulary class, Day 6, Week 2)

1 T1: zenme shuo(.) eh portable↑ computer↑
 { how say }

{how to say}

2 (1.7)

3 S?: diannaο shouti*

{computer hand lift}

((12 minutes' interaction omitted))

4 T1: zenme shuo Apple↑

{how say }

{how to say}

5 SS: oh↑



6 (1.2)

7 T1: zenme shuo

{how say }

{how to say}

8 (1.5)

9 T1: My laptop is (.)ah(...)apple

((30 seconds' interaction omitted))

10 T1: ah:>zenme shuo< Sam↑sung

{how say }



{how to say}
11 (0.8)
12 S1: bu zhidao
{N1 know }
{I don't know}

While introducing the L2 lexical item ‘diannaο (computer)’, T1 intends to expand learners’ vocabulary to ‘laptop’ which is literally translated in Mandarin Chinese as ‘shouti diandao (portable computer)’, in which ‘shouti’ means ‘lift by hand, portable’. She uses ‘zenme shuo...’ to elicit the form from the whole class. As the transcript shows, one learner provides a problematic expression. Later in the class, the conversation extends to the names of technology companies such as Apple and Samsung. The same L2 structure has also been used by T1 to elicit responses from the learners. The learners are familiar with the pattern, when asked, they are able to respond to the question posed through ‘zenme shuo...’ and responds appropriately (lines 3, 5 and 12). At the moments T1 deploys the structure ‘zenme shuo...’, according to the video recordings, S1 is engaging with the teacher and the learning activity through responding, taking notes and making eye gazes. Especially in the last example, S1 responds to the elicitation, which is the evidence that S1 understands the meaning of the structure as well as the interactional actions it enacts.

In Week 3, the use of ‘zenme shuo...’ continues to show up in classroom data.

Excerpt 5.19 (reinforcement class, Day 13, Week 3)

1 S2: ((rising hand to attract T1’s attention))
2 ehm if you want to add like time(.)in there would you
3 still use the same pattern sentence like I’ll get plane

4 in 5 minutes(.) would you still use the same sentence
5 pattern or
 you just like

6 T1: ni zenme shuo
 {you how say }
 {how would you say?}

7



(1.3)

In this episode, another learner S2 asks for the clarification from T1 about the construction of an L2 sentence pattern. Instead of giving the information directly, T1 chooses to use ‘ni zenme shuo...’ to push the learner to construct the sentence. S1 does not involve verbally in the interaction, but through his eye gaze, displays his participation in the interaction.

In previous section 5.5.1, in Week 4, on Day 16 of the whole data collection period, S1 shows the evidence of the development from relying on the L1 structure ‘how (would) you say.../could you say...’ in the first three weeks, to the incorporation of the L2 structure ‘zenme shuo...’ to fulfil the same interactional goal of eliciting help in the fourth week. Through the presentation of some of the instances of the teacher and peer learners’ use of the same L2 structure, it is evident that this particular structure is routinised in T1’s teaching repertoire. She has been employing the structure as a device to elicit learners’ responses, mostly during vocabulary learning but also in requesting and encouraging learners to produce L2 sentences.

From the data presented above, it is elucidated that the learners in this classroom, including S1, are familiar with this teaching technique. As an L2 linguistic structure that is introduced earlier in their L2 learning, they understand the meaning as well as the function of the structure. Furthermore, they are able to orient to the same pedagogical goal with the teacher,

by responding to this eliciting utterance appropriately. T1 uses this structure to help learners with the word-searches or to reinforce their understanding about the semantic meanings of the L2 linguistic items, either in whole class teaching or in S1's small group talk.

Her recurrent and routinised use of the structure, in fact, creates a range of genuine contexts for its use, consequently, models that how the particular structure 'zenme +verb' is used in everyday life conversations to request information. The use of the structure in the whole class activities and in the interactions with other learners in small group work, create rich affordances for S1 to grasp the structure's meaning and pragmatic use, which leads to his recycle of the structure in the final week of the instruction. The development of S1's control of the structure 'zenme shuo...' in relation to T1's consistent use, echoes with the sociocultural perspective of L2 learning. That language is one of the most important semiotic resources for L2 development, and an individual's development is embedded in and derived from the interaction with the expert or more capable peers.

S1's development of 'zenme shuo...' is also a sign of his emerging L2 interactional competence. As a beginner of Mandarin, S1 has no formal Mandarin learning experience and only has limited contact with the language before he joins the programme. With limited L2 linguistic and interactional competence, most of his learning activities are mediated through L1 English in the interaction with the teachers and peer learners. Consequently, using the appropriated L2 grammatical structures as devices and psychological tools to regulate the L2 study is a challenging task for him. After five months' study, by the end of this semester, he starts to use the newly acquired L2 structure to interact with the teacher. The action is categorised as grammar-in-interaction (Pekarek Doehler, 2018), although he does not yet have full control of his emerging L2 linguistic competence as he shifts back to use the L1 to fulfil the same interactional and learning goal (see Section 5.5.1).

Pekarek Doehler's (2018) work tracks an upper-intermediate French learner's developmental trajectory of the interactional use of the grammatical structure 'comment on dit'—the French equivalent of 'zenme shuo...'. She concludes that such grammatical form is already part of

the learner's L2 repertoire and interactional competence, but only progressively used for interactional purposes in rather late stages of the L2 learning process. S1's development from L1 'how (would) you say...' to L2 'zenme shuo...' shows that at the very early stage of L2 learning, how a learner's L2 interactional competence emerges, although this L2 interactional competence is yet pre-mature and unstable. The L2 beginner has the potential to develop L2 interactional competence at an early stage, while the learning context provides rich affordances and mediation in the interaction.

5.6 Summary

This chapter examines the examples of S1's microgenesis of the L2 components, and how the teacher and the learner work collaboratively upon the linguistic and semiotic interactional resources in the classroom to co-create opportunities for L2 development.

Specifically, Section 5.2 shows that T1 contingently acts upon the learner's L2 problem, helps the learner in appropriating unplanned vocabulary. From S1's perspective, through the creative imitation of teacher's affordances, S1 appropriates the unplanned lexical item 'shui' as he expands its use in a new sentence independently. Section 5.3 shows how S1's understanding of the sentence pattern 'you...you...' progressively changes according to T1's mediation provided through interactional moves such as prompting, emphasising, explicating and modelling. Section 5.4, taking the example of the learning of locative phrase 'zai...', the analysis examines how T1's prompts help the learner to pay more attention to the word order in the target language. The finding suggests that learners' incapability could be attributed to the inactive knowledge, which is a sign of incapability of self-regulation. Section 5.5 looks at the data from a holistic view through Week 1 to Week 4, depicts how T1's recurrent and routinised use of the L2 structure 'zenme shuo...' affords the formation of S1's emerging L2 interactional competence. The findings in this section see a changing but yet unstable route of S1's L2 interactional competence, provide the evidence that S1 has started to develop his L2 interactional competence at an early stage rather than in late stages of L2 acquisition.

Chapter 6. Discussion

6.1 Introduction

Theoretically and methodologically underpinned by SCT, with the detailed microgenetic analysis of the classroom interaction, this study has explored how the mediation is enacted by the teachers and how it is appropriated by the focal learner to facilitate learning activities within the ZPD. The purpose of this chapter is to re-examine the research findings presented in the preceding analysis chapters in depth, and makes relevant discussion in relation to the literature. The discussion focuses on the co-constructed, mediated nature of classroom interaction, and how appropriated mediation influences S1's potential learning and development. The pedagogical implications are also suggested according to the empirical findings in this research.

6.2 The mediational practices and affordances in this CFL classroom

As reiterated in Chapter 2, SCT advocates that interaction with adults and experts is the primary source for children's development and socialisation (Vygotsky, 1978, 1986; Wertsch, 1985; Newman and Holzman, 1993). Human higher mental functioning is distributed between individuals as they interact with each other (Vygotsky, 1978). The same claim has also been extended to the research of L2 development in applied linguistics (see Fahim and Haghani, 2012; Lantolf and Poehner, 2014; Lantolf and Beckett, 2009; Negueruela, 2003). In the previous analysis chapters, the detailed analysis of classroom interaction demonstrates how the mediation is provided through the interaction in different classroom activities. The analysis also reveals that through co-regulation, the focal learner S1 appropriates the mediation to support L2 learning. In this section, the findings will be further discussed regarding the relevant literature.

6.2.1 Scaffolding practice as mediated co-regulation in tasks

The origin of scaffolding is the metaphor defined by Wood et al. (1976) from the observation of mother-child interaction. It strongly focuses on the completion of the task, and it is goal-oriented (Mercer, 1995). Guided by the six features of scaffolding that proposed by Wood et al. (1976), the analysis of the instances of scaffolding practices in Chapter 4 focuses on the

scaffolding features fulfilled by the teachers' interactional moves while assisting S1 to complete the L2 tasks.

It is found that in a task which is oriented to foster learners' ability to convey L2 meanings, the teacher scaffolds the focal learner by breaking a relatively broad task into sub-tasks with several probing questions, which makes the task more accessible and meanwhile maintains the goal-orientation of the classroom activity. According to S1's ZPD displayed through the linguistic products he produces in independent performance, T1 deploys the linguistic (L1 and L2) and paralinguistic resources, through the interactional moves including recast, reformulation, prompts, wait time and repeated use of probing questions. The scaffolding features of recruiting the focus, simplifying the task, and maintaining goal-orientation are clearly embodied in co-constructed interaction, which facilitates the focal learner's task completion.

For tasks which have a clear form-focused orientation (e.g., Excerpt series 4.2) rather than focusing on the interaction and meaning, the scaffolding from the teacher shows the difference. While S1 overtly claims the lack of sufficient knowledge for the task, T1's scaffolding has made the assistance available on the linguistic properties of the L2, such as the sentence order, lexical meaning and pronunciation. Similarly, the scaffolding is carried out with the use of linguistic resources (e.g., L1 English equivalents, correct L2 forms), paralinguistic resources (accentuation, elongation, intonations, tempo of speech delivery) and extended wait time (Walsh and Li, 2013) to help and encourage the learner to produce the expected L2 forms. In the form-focused task, the interactional moves involved are recurrent modelling, metalinguistic explanations as well as DIUs (Koshik, 2002; Margutti, 2010). The scaffolding features embodied in form-focused tasks are simplifying the task, modelling the correct form and meanwhile marking the critical feature of linguistic forms which are the key to the task for the learner. It can be seen that in this CFL classroom, the scaffolding features, along with the interactional moves and resources involved to fulfil these features, are changing in accordance with the differences in task orientations and pedagogical focuses.

The interactional moves in the operationalisation of scaffolding identified above in the data from this CFL classroom partially collaborates with the research findings of Adair-Hauck and Donato (1994), Antón (1999), McNeil (2012) and Lugendo (2014). The use of linguistic means and strategies such as recast, modelling, probing questions and wait time are also found in the present study. However, the paralinguistic resources in T1's interactional repertoire play a crucial role in the scaffolding examples presented in the preceding chapters. Those resources highlight the important semantic meanings in her scaffolding utterances for the focal learner's understanding of the task (see Excerpt 4.1.1 and 4.1.3) and L2 target forms (see Excerpt 4.2.2).

In Langer and Applebee's 'instructional scaffolding' model (Applebee and Langer, 1983; Langer and Applebee, 1986) which is based on the scaffolding taxonomy of Wood et al. (1976), the first component of effective instruction is *ownership*. To be able to have ownership of the task, learners need to be able to see the point of the task, to have a sense of purposefulness to integrate task elements as a coherent entity (Langer and Applebee, 1986:186). In S1's case, while completing the interaction-oriented task (e.g., the narration task as Excerpt series 4.1), T1 foregrounds the learner with clear directions of how to complete the task, but there are still several instances of distraction, which made her recruitment of focus necessary (Excerpt 4.1.2 and 4.1.3). The instances of distraction are the indicators that the focal learner does not know the nature as well as the expectations of the task. Hence the distraction further illustrates that he lacks control and ownership of the task at hand.

As learners' task ownership and responsibility is the condition for further scaffolding (Michell and Sharpe, 2005), from the scaffolding examples in the present study, it is observed from the data that T1 has put on effort to establish the task ownership for S1 through repeated use of probing questions (Cazden, 1983) to recruit his focus. On the contrary, in the form-focused task (e.g., Excerpt series 4.2), S1 displays better task ownership. He demonstrates a better understanding of the nature of the task and becomes able to show the awareness of the relevant L2 knowledge involved. Since the task aim is to elicit grammatically correct L2 from

the learner, thus the scaffolding features like modelling and marking critical features become salient to the learner's completion of the task. In this kind of scaffolding, the learner's appropriation of the affordances is mainly through imitation of the teacher or more capable peers' modelling.

From the learner's perspective, when the learner has less task ownership as discussed above, his execution of the task is dependent on the teacher's scaffolding, by answering the probing questions. Besides answering the particular questions, the learner does not show more learner agency (Ahn, 2016) to appropriate the affordances embedded in scaffolding practices. His behaviours have been largely and cognitively regulated by the context and other interlocutors' utterances and behaviours around him. This finding is in line with Frawley's (1997) argument, that when adult learners encounter a cognitively challenging task, their regulation process could be reversed from self-regulation to other-regulation or even object-regulation (Frawley and Lantolf, 1985). In this sense, S1's derail from the task shows that his independent task performance is in object-regulation by the context, which makes T1's other-regulation within the ZPD becomes necessary. In the tasks that S1 has more control, by picking up the assistance (e.g., modelling, see Excerpt 4.2.2 and 4.2.3), his learner agency is activated through the use of interactional resources, including pauses, elongated utterances, lower volume, and eye contact.

The concept of scaffolding metaphor has been receiving criticism for having the risk to treat the classroom interaction as unilateral (Valsiner and van der Veer, 1993), teacher-driven (Stone, 1998; Verenikina, 2008) and lacking evidence to promote development (Alsowayegh, 2015). In the present study, as previously discussed, the learner's incapability to complete the task independently leads to the teacher's scaffolding. Then according to the scaffolding provided by the teacher, the learner responds and appropriates the affordances. Subsequently, the learner's imitation or answers to the questions, in turn, invite the teacher to give more assistance. This scaffolding loop, which is evident in the data, requires both the teacher and the learner to be sensitive and contingent to each other's interactional utterances and behaviours to keep the scaffolding proceeds, then ultimately assists the learner to complete

the task. Their scaffolding interaction, through the SCT lens is co-constructed and co-regulated by both the teacher and the learner (Michell and Sharpe, 2005), rather than predominantly teacher-driven and unilateral.

In the interaction-oriented task, the teacher's probing questions not only elicit the answers for the particular narrative task, but also in a sense create a semi-genuine context for L2 interaction which resembles the mundane conversation. Furthermore, through the imitation of the linguistic items towards the scaffolding in form-focused tasks, S1 appropriates the correct L2 forms. Thus, such imitation and appropriation suggest learning opportunities (Walsh, 2006) for the learner to process the L2 forms 'off-line' (Meltzoff and Gopnik, 1989; Meltzoff, 2002) for future interaction. These features embedded in scaffolding suggest that in addition to benefiting the completion of the particular task, instead of being unilateral and teacher-driven, scaffolding within the ZPD requires the active involvement and autonomy of the learner, henceforth it has the potential to promote L2 development.

6.2.2 Mediation, negotiation and re-mediation

In the previous section, the scaffolding and its relation to task completion as well as L2 learning and development have been discussed. In this section, according to the findings from the analysis, the re-examination focus is the SCT construct regulation and co-regulation. The dialectical relationship encompassed in teacher-learner interaction will be addressed.

In the co-regulation examples (Excerpt series 4.3 and 4.4) presented in Chapter 4, the focal learner and the teacher T1 have been working in the joint construction of the learning experiences. S1 shows the ability to systematically enact mediation from the teacher. During the co-regulation activities, through the use of clarification requests, confirmation checks, the focal learner displays the interactional competence (Hall and Pekarek Doehler, 2011; Young, 2000, 2011, 2013) to hold the floor from the teacher to clarify (Excerpt series 4.2) and elaborate (Excerpt series 4.3) his own conceptualisations of the linguistic forms under discussion. These enactments and learner initiatives (Waring, 2011; Greer, 2016) reveal his ZPD, which sends signals to the teacher thus regulates T1's mediational behaviours. In both

cases, when S1 has initiated the assistance and T1 detects the L2 problem, the primary regulatory choice from T1 is the L1 explanation (e.g., Excerpt 4.3.1 and 4.4.1). Teacher regulation at this stage makes the discrepancies exist in the learner's original understanding of the L2 linguistic properties salient. Based on teacher regulation, S1 forms a new understanding. In both Excerpt series 4.3 and 4.4, the newly emergent issues in S1's modified conceptualisations in turn again regulate and trigger re-mediation from the teacher. In this re-mediation, on the basis of her evaluation of the learner's dynamic ZPD, T1 changes the interactional resources and organisation to provide more support which ultimately pushes the learner to move into a new developmental level within the ZPD.

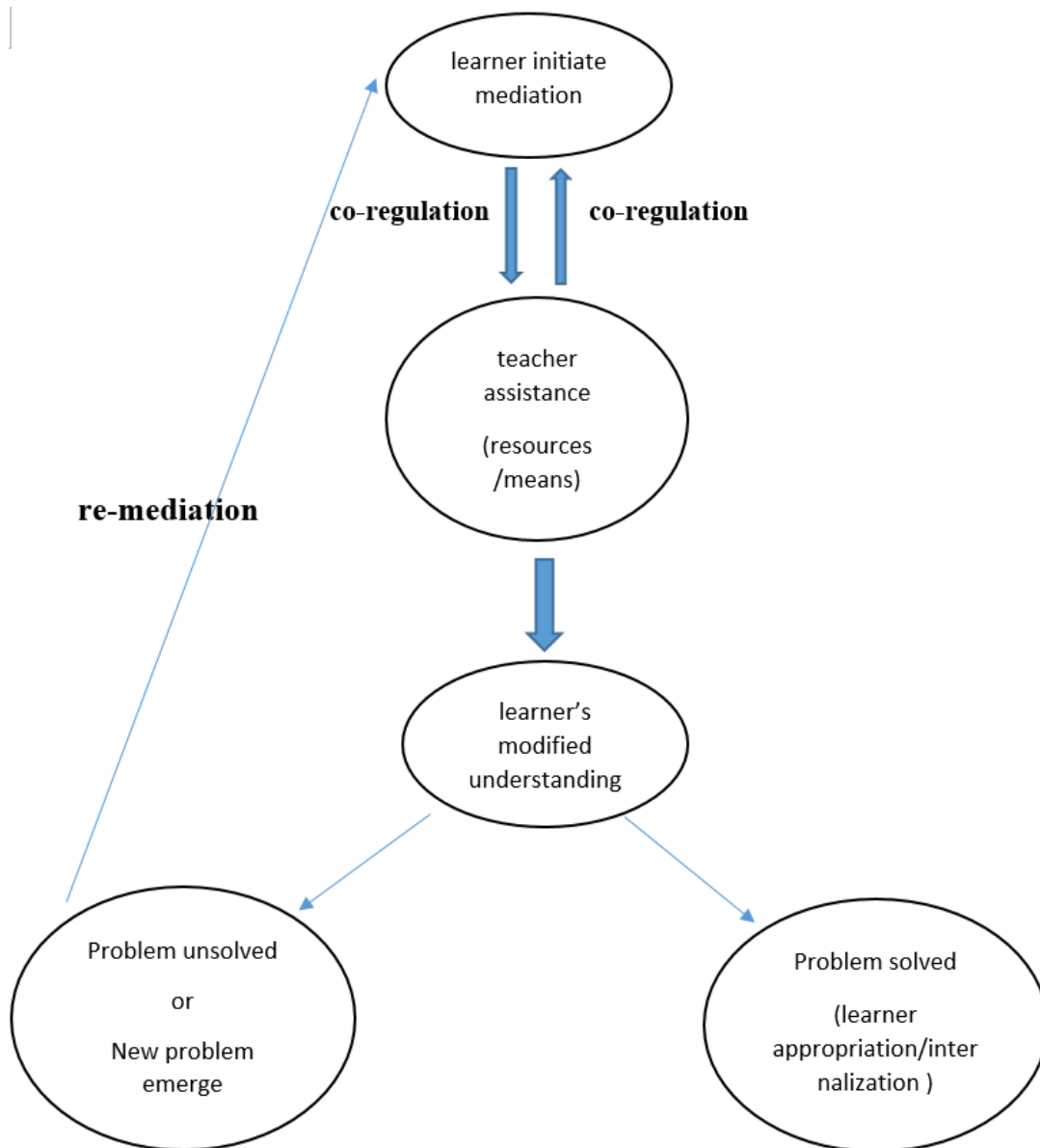


Figure 6.1 the co-regulation and negotiation loop

Figure 6.1 shows how the focal learner and the teacher negotiate on the meanings of the target language, and through this collaborative process, both the teacher and the learner orient to the same learning goal. In this co-regulation and mediation—re-mediation process, the relationship between the teacher and the learner is dialectical. Both the teacher and the learner are actively engaged in the co-regulation, share the responsibility of knowledge construction (Mercer, 2011; Heritage, 2018).

This mediation—re-mediation process repeats several times, each time brings the learner new insight and understanding of the linguistic knowledge. Through this co-regulation process, gradually the teacher and learner reach a mutual understanding of the meaning of the learning object and learning agenda. To be able to involve in such a thought-provoking process, and make it beneficial to learning, the learner needs to share the same agenda with the teacher in both learning object and interactional orientation. The data from Week 3 and Week 4 demonstrate that S1 has the ability to initiate the assistance when the L2 problems emerge, and is psychologically ready to orient to the same pedagogical goal and interactional agenda as the teacher does. Learner agency (Ahn, 2016) demonstrated in these co-regulation process is collaborate with the SCT's view that the development is derived from co-constructed interaction (Poehner, 2008; van Compernelle, 2010a; Poehner and van Compernelle, 2013), in which the learner actively engages in the activity rather than being a passive recipient of the interaction (Verenikina, 2008).

From the teacher's perspective, in the co-regulation process which involves mediation and re-mediation, the teacher's responses to the learner's dynamically changing L2 conceptualisations are contingent. These findings support Aljaafreh and Lantolf's (1994) argument that the teacher's feedback in teaching should be contingent and negotiated. The aforementioned co-regulation instances are all observed in T1's reinforcement classes and oral classes, in which the teaching style makes the context interaction-oriented and mediation-rich.

As described in Chapter 3 (see Section 3.5.4), the class type defines the different interactional organisation of the class. In contrast with T1's classes, the grammar lecture which is taught by T2 follows a rigid teacher-dominated interactional organisation. In the analysis of the L1 as the interpsychological mediational resource in Section 4.4.1, we have already seen the typical grammar lecture's interactional organisation (e.g., Excerpt 4.8 and 4.11). The classroom observation informs the researcher that the interactional organisation in grammar lectures in this CFL classroom is largely controlled by the lecturer T2. Its turn-taking system is governed by the seating arrangement, rather than being negotiable as in T1's classes. The classroom interaction strictly follows the IRF (Initiation—Response—Feedback) pattern (Sinclair and Coulthard, 1975). The main activity in these lectures is translation. Through translating the ready-made sentences in the textbook, T2 explains the L2 grammar knowledge and corrects the learners' errors when they emerge. The two transcripts (Excerpt 4.8 and 4.11) taking the S1's translation activities as examples, clearly shows the classroom interactional pattern of T2's grammar lectures.

In these lectures, it is observed that when learners, including S1, encounter L2 problems, there is few co-regulation. As the translation activities are strictly form-focused, T2 tends to correct any error that the learners make, from the pronunciation to the lexical and grammatical knowledge. Moreover, T2 interrupts and corrects the learner immediately after the error is made. This is evident in both Excerpt 4.8 (lines 4-10) and 4.11 (lines 2-10). In these episodes, T2 does not give extended wait time for S1's mistakes, instead, he corrects and models the correct L2 forms immediately. S1's responses in these two episodes are to imitate the correct forms.

T2 employs mediational resources such as DIUs, L1 equivalent prompts, L1 metalinguistic explanation, modelling, as well as prosodic stresses and intonations accompanying these means to mediate S1's mastery of the target forms. However, compared to T1, T2 uses less linguistic and interactional resources for mediation. There is no extended teacher wait time for learners to formulate and re-formulate their L2 products, to reflect their L2 conceptualisations

and language awareness. These mediational resources are also used by T1, but T1 uses the resources in various ways, for example, the probing questions, display questions, L1/L2 prompts, long wait time, and extra complementary information in explanation. T1 shows more diversity in the execution of the linguistic and interactional resources. In T2's classes, fewer learning opportunities are created for the learner to discuss and explore the use of the L2. As a result, the grammar lectures do not recognise the co-regulation loop (Figure 6.1) which interactively involves the L2 learners within the ZPD. As T2's teaching mainly focuses on the completion of the immediate translation task, except the general metalinguistic explanation (Excerpt 4.11), the researcher does not observe that T2 pushes or encourages learners to extend the L2 knowledge and forms they discuss at the moment to a new sentence, scenario or context.

Finally, my argument towards the co-regulation in this CFL context is that although T2 responds actively to learners' problematic L2 issues within each sub-task, in grammar lectures, the focal learner is not supported through detailed and tailored dynamic assistance to co-construct the learning experience with T2. The learner is offered less learning opportunities and affordances to engage in thought-provoking activities. The learner's role and performance in the grammar lecture, compared with his active role in the interaction in other types of classes in which the co-regulation loop is observed more often, are more inclined to be a recipient of linguistic knowledge input (Miller, 2005), rather than a co-constructor of learning experiences.

6.2.3 Affordances in mediation

According to the analysis of the data in previous chapters, with the framework of scaffolding which has long been established to be beneficial for educational research (see Pea, 2004; Boblett, 2012; Foley, 1994; Kayi-Aydar, 2013), the assistance provided by T1 in L2 language tasks to promote the focal learner's development within the ZPD have been analysed. For assistance and mediation towards the L2 problems which emerge naturally and contingently from other types of classroom activities without a clear task-orientation, this study analyses and discusses them under the category of affordance (van Lier, 2000).

Concerning the affordances in different classes in this particular context, it is necessary to reiterate how affordance is defined in Chapter 2 for this study. In this CFL context, affordances are interactional moves conducted by the teachers or peer learners, which provide support for knowledge-building, meaning-making, deepening understanding towards the linguistic structures and meanings, and open spaces for learning. For a potential affordance to take effect on learning activities, the learner should be able to perceive, value and recycle it; otherwise, the affordance resides in the context and classroom interaction is not activated and is considered as irrelevant.

In the analysis of how affordances are made visible and relevant during classroom interaction, three examples have been offered to depict different ways that affordances emerge and the different consequences they enact for S1's learning activities. The peer-interaction and the interaction between other learners and the teacher in the language classroom is a potential benefit for learner development (Watanabe, 2008; Philp, Walter and Basturkmen, 2010). In the current study, the data demonstrated in both Chapter 4 and Chapter 5 testify that peer-interaction and interaction between the teacher and other learners is an integral part of the affordances in the classroom.

During the classroom interaction, there are instances observed that T1 deliberately brings other learners (McNeil, 2012) into the interaction to correct S1's mistakes and afford S1 learning opportunities to reflect on his L2 understanding. For example, in Excerpt 4.3.3 and Excerpt 4.5, when dealing with S1's L2 problems, T1 chooses to ask another learner to explain for him. This move gives support from learner's perspective (Excerpt 4.3.3) and raises both learners' language awareness (Excerpt 4.5). Besides bringing in other learners deliberately, other learners would join the discussion between S1 and T1 as well (see Excerpt 4.3.1, 4.4.3, 4.8, 4.13, 4.15, 5.7, 5.10). Their participation contributes as affordances for S1's development. Learners either help T1 to explain the particular linguistic knowledge to S1 (Excerpt 4.3.1) or engage in the discussion to provide their own understanding (Excerpt 4.15). In both cases, these engagements mediate S1's learning that after their engagement he

demonstrates changed understandings.

In other examples, learners join the conversation by giving expected answers to the questions that were originally directed to S1. Their answers, correct ones (Excerpt 4.4.3, 4.7.1, 4.8 and 5.10) and wrong ones (Excerpt 5.7) all are affordances to mediate S1's formulation of his own answers to these questions. When scrutinising S1's development of the use of the L2 phrase 'zenme shuo', the data also shows that except for the assistance given by the teacher, peer-interaction also mediate S1's learning activities. It is often observed that when S1 encounters problems in word-search, he seeks assistance from his more capable peer learners as well (e.g., Excerpt 5.12 and 5.13). Other examples during his development also provide evidence that actively attending to peer interaction and classroom interaction between other participants contributes to S1's mastery of the particular linguistic patterns.

The findings regarding the peer interaction and interaction between other participants to which the learner actively attends in this classroom, provide more empirical evidence that learners collaboratively help each other within the ZPD (Donato, 1994; Antón and DiCamilla, 1999; Guerrero and Villamil, 2000). In this classroom, the learners are able to join the conversations to mediate each other's learning while the whole class is discussing a specific L2 problem. However, in smaller groups, the learners usually are not able to locate the L2 problem in each other's linguistic production independently. Under these circumstances, the teacher needs to explicitly direct the peer-interaction to focus on the problem (e.g., word order in Excerpt 4.5, meanings of the aspect markers 'le' and 'guo' in Excerpt 4.3.3). Mediation provided by the more capable peers, although it is a significant affordance in the context, this affordance still needs the teacher's direction and mediation to be made into effect.

van Compernelle (2015) emphasises that in order to trace the genesis and microgenesis of L2 development in classroom interaction, learners' knowledge of language and language use need to be conscious and made relevant during the interactional process. The learner's knowledge system does not necessarily need to be complete and correct, rather it is more important that the interlocutors make the knowledge relevant thus create learning

opportunities (Walsh, 2006; Walsh and Li, 2013) for the learners to consciously link the knowledge with the linguistic performance and interaction. The teacher's interactional move to bring another peer student into the mediation (e.g., Excerpt 4.5) vividly exemplifies that learners' knowledge and awareness about the L2 has to be made relevant to be effective for learning. As the analysis shows, this peer-interaction activates S1's existing but inactive L2 knowledge (e.g., word order). By giving prompt to bring the peer learner into the interaction (McNeil, 2012), the teacher creates learning opportunities for all learners involved to become conscious about the grammatical properties of the L2.

It is argued by van Lier (2000) that the nature of affordance is a relationship between the environment of learning and learners, there must be a 'match' between the learner and environment (van Lier, 2004; Peng, 2011). The affordances made visible for learners during interaction need to meet learners' needs. Regarding the guarantee of the efficacy of affordances, teachers are expected to make sensitive judgements about the nature of the problem that learners encounter, and what the insufficient knowledge gap is in their ZPDs.

The affordances provided in the example in Excerpt series 4.6, demonstrates that when the affordances do not match with the learner's needs, they render the interaction and mediation less effective. When the teacher detects the respective trouble sources for both learners in the group, instead of making explicit orientations respectively to address the trouble sources, the mediation provided is implicit, only signals that the L2 products are problematic through recast, prompt and modelling. The teacher is mediating both learners at the same time without a clear focus on either of the problems. She failed to provide appropriate assistance according to the roots of each learners' particular L2 problem. Thus the affordances made available in this episode of interaction mismatch with learners' needs. Hence they create confusions and make the mediation ineffective. Although as the teacher-learner negotiation proceeds, T1 changes the resources of mediation (in this example, from interactional devices of recasts to L1 equivalent prompts, which is more explicit and effective in explanation, see the analysis of Excerpt 4.6.2), which is picked up by the focal learner. However, it can be argued that both learners' L2 problems remain unexplained and problematic.

The finding here supports van Lier's (2004) claim that the affordances must match with the environment so that they could be made use by learners. In contrast to this example of the mismatch between affordances and learners' needs, the example in Excerpt series 4.7 shows a different picture. The affordances made available match the learner's particular learning needs. Hence, the learner is psychologically ready and able to perceive them to transform his L2 repertoire.

The above findings drawn from the analysis of the affordances provided by T1 in form-focused learning activities exemplify that affordances could create a variety of learning opportunities which have the potential to benefit the learner with the cognitively challenging activities of knowledge-building and meaning-making in the language classroom. These findings also remind researchers and language teachers that whether an affordance is effective and useful for learners' L2 development, first depends on teachers to make the appropriate assessment about learners' ZPDs and the nature of their problems; second, learners should be motivated to make links and matches between L2 gaps and assistance provided.

The differences between the teaching approaches of T1 and T2 provoke the researcher to closely look upon the affordances the two teachers enact in the classroom teaching activities. As previously discussed in Section 6.2.2, the grammar lectures closely focus on the learning and appropriation of grammatical rules and linguistic forms, while the other types of classes taught by T1 focus more on both internalisation and externalisation of the language (Zinchenko, 2002). Regarding the affordances available in the interaction, few instances of peer-mediation and teacher-learner negotiation have been observed in grammar lectures (see detailed discussion in Section 6.6.2). The teaching follows rigid interactional organisation with pre-determined activities and turn-taking mechanism. In this sub-context, the learners, including S1, are rarely given sufficient and contingent opportunities to initiate mediation sequences.

The teacher T2 tightly focuses on the immediate task under discussion (see Excerpt 4.8 and

4.11). From observing classroom interaction in grammar lectures, it is found that T2 scaffolds the learner through correction, directly offers L1 equivalents as prompts, or provides metalinguistic explanations. The interactional moves which create ‘space for learning’ (Walsh and Li, 2013), such as increased wait time, extended learner contribution, and longer planning time, are not observed in the grammar lecture. This classroom context is tightly controlled, although the grammar lecturer’s scaffolding assistance helps the learner to complete the immediate task, and create some affordances. These scaffolding and affordances offer less learning opportunities and spaces for the learners to engage in meaningful and affordance-rich co-regulation activities with the teacher or other peer learners to move into the next developmental level within the ZPD.

As discussed in Section 6.2.2, the grammar lectures use less interactional resources to mediate learning, there is no co-regulation loop and less learning opportunities for learners to explore and extend the L2 knowledge and use. In a word, the grammar lectures in this CFL classroom could be categorised as an ‘affordance-constrained’ context (Miller, 2005). Learners are directed to focus on the particular sentences they are working on with the lecturer at the moment, instead of working on various language-related activities collaboratively. The lack of co-regulation loop deprives learners’ chances to externalise and testify their conceptualisations and hypotheses about the L2. The ‘affordance-constrained’ context also constrains the interactional space and learning opportunities.

On the contrary, in T1’s classes, from the data presented in analysis chapters, it is evident that a variety of interactional moves creates learning opportunities and affordances for S1’s learning activities. For example, prompts, probing questions (Cazden, 1983), reformulation, recasts (Lyster, 1998), wait time (Walsh, 2006), and optimal use of L2 (Macaro, 2009). Those interactional moves create rich affordances for S1 to engage in the interaction, which is the source and driver for L2 development (Lantolf and Thorne, 2006; van Compernelle, 2015). The empirical evidence from S1’s learning in this CFL classroom resembles the differences between affordance-rich and affordance-constrained contexts in Miller’s (2005) research.

6.3 The focal learner's appropriation of mediation and development

The above section focuses on the findings of the analysis of mediation provided through the practices such as scaffolding and co-regulation, which create affordances on the interpsychological plane. The central argument of SCT as a theory of learning and development is that an individual's development is derived from interaction with experts in the society (Vygotsky, 1962, 1978, 1987), first at the interpsychological plane, then through internalisation, the development occurs at the intrapsychological plane (Lantolf and Thorne, 2006). Therefore, from the SCT perspective, the learner's appropriation and internalisation of the aforementioned assistance and affordances in the mediation sequences play the crucial role in his L2 ontogenesis and microgenesis. In this section, how the focal learner S1 recycles, appropriates and internalises the mediation, and what the consequences of the internalisation of the mediation will be further discussed.

6.3.1 Imitation of the linguistic modelling

In this particular CFL context, as discussed in previous sections, T1 and T2 assist S1 in different language learning activities and tasks which are embedded with a variety of opportunities for development within the ZPD. It is observed in S1's responses that the Vygotskian sense of imitation is a crucial and fundamental strategy for S1 to appropriate and internalise the assistance in regard to linguistic forms.

Vygotsky (1978, 1986) has emphasised the importance of imitation during internalisation. It is revealed from the data that as an adult learner of Mandarin Chinese at the beginning level, whose L2 proficiency is constrained, S1 heavily relies on the mechanism of imitation to appropriate the teachers' modelling in the activities that focus on the linguistic forms and properties of the L2. In these activities, S1's imitation of teacher modelling is pervasive through Week 1 to Week 4 when he has insufficient conscious control of the L2 in different situations. This finding collaborates with the argument of Lantolf (2000b) and Tomasello (2003) that imitation is one of the primary pathways for internalisation of L2 knowledge, concepts and patterns.

Lantolf and Thorne (2006) point out that in the adult language classroom, more instances of precise copying are observed in this kind of context as it more or less requires learners to ‘get the answer right’. In S1’s collection of imitation instances, the majority is precise copying of the teachers’ modelling of the linguistic forms, including the imitation of pronunciation (e.g., Excerpt 4.11), grammatical patterns (e.g., Excerpt 4.2.3, Excerpt 4.7.1) and lexical items (e.g., Excerpt 4.14). In some cases, S1 also imitates the paralinguistic features of the teachers’ modelling (e.g., Excerpt 4.14 and Excerpt 5.3). These examples of imitation coincide with Lantolf and Thorne’s (2006) observation of the precise copying of adult language learners. It can be argued for S1’s case, as an L2 adult learner with a relatively low L2 proficiency, the L2 utterances and products are mediated by other-regulation (e.g., teacher’s modelling/correction).

The imitation of teacher modelling is a necessary process for appropriation and internalisation of the L2 linguistic knowledge and use at the beginner level. The instances of imitation as private speech are also observed (e.g., Excerpt 4.13, Excerpt 5.5). Especially in Excerpt 4.13, S1’s imitation resembles what Murphey (2001) coins as ‘conversation shadowing’ as he partially imitates the peer learner S2’s utterance for his own understanding of the lexical item. Through imitation, S1 is cognitively attending and processing the target language to internalise it for future use.

Although S1’s L2 proficiency is limited and pre-mature, some instances of creative imitation (Poehner, 2008; van Compernelle, 2015) has provided a window for the researcher to S1’s emerging development. For example, in Excerpt 4.7.2, S1 first partially imitates the teacher’s previous modelling, but with ellipsis, which is an indicator of private speech. Then he creatively re-uses the same linguistic resources through ‘reflexive imitation’ (Poehner, 2008) in peer-interaction to elicit information. van Compernelle (2015) finds out that advanced learners of French utilise delayed private speech as language play and rehearsal for language development. S1’s private speech imitation suggests that in the beginners’ class, with limited L2 proficiency, S1 is still competent to use the similar imitation mechanism to appropriate mediation. Language learning and appropriation strategies as such emerge at the early stage of

L2 learning, rather than develop in late stages when learners have better control of the L2. The same strategy of re-using the linguistic resource in imitation can be seen in Excerpt 5.3. The modified reproduction of the L2 embodies the SCT view towards learner imitation, hence provides more empirical evidence from L2 Mandarin Chinese classroom for Vygotskian L2 learning and development research.

6.3.2 From input recipient to learner agency

In the previous chapters and sections, various kinds of resources and interactional moves from the teachers and the affordances created by these resources and interaction in the classroom have been discussed. In this section, the re-examination of the data focuses on the impact of these affordances on S1's L2 learning and development.

While responding to the teachers' mediation, S1 utilises linguistic resources (both L1 and L2) and interactional resources such as reciprocity, elaboration, clarification, to name a few, to interact and negotiate linguistic and interactional meanings with the teachers to internalise and appropriate mediation which thus benefits his L2 development. Through four weeks' classroom instruction which across two months' time, it is observed that S1's development is undergoing a process from complete other-regulation to more autonomous self-regulation.

In the first two weeks' instruction before the Easter holiday, in regard to both teachers' assistance, most of the instances, S1 responds with receipt tokens such as 'yeah', 'okay' (e.g., Excerpt series 4.15, Excerpt 4.11, Excerpt 5.10) and backchannelling (e.g., Excerpt 4.1, Excerpt 5.11). S1's interactional behaviours are confined to responding to the teachers' particular probing questions and linguistic prompts. In linguistic form-focused activities, as discussed in the last section, precise imitation is the primary means for learning and appropriation. Based on the evidence, the conclusion can be drawn that S1's learning and appropriation behaviours are tightly regulated by the teachers' language use and classroom interaction. There are fewer instances that he negotiates and co-regulates the learning objects and activities with the teachers. S1 acts more as a recipient in classroom interaction. However, it is also to be noticed that although S1's L2 and interactional behaviours are under other-

regulation through the language, he still displays his learner agency (Waring, 2011; Ahn, 2016) to some extent through being an active listener (Young, 2013), that he cognitively attends to the affordances available at the interpsychological level.

As the semester proceeds, changes are observed in the teacher-learner interaction in T1's classes. It is previously discussed in Section 6.2.2 and 6.2.3 that for the whole semester, T2's grammar lectures are teacher-dominated, strictly follows the IRF interactional pattern (Sinclair and Coulthard, 1975), and the turn-taking system is pre-determined by learners' seating. The interactional pattern of the lectures restricts learners to freely initiate the negotiation of meanings and learning opportunities. As a result, in grammar lectures, in Week 3 and Week 4, S1 stays as the recipient of the teaching, translating the pre-made sentences in the textbook, responding to T2's questions and prompts, imitating T2's modelling. The following changes have not been observed in T2's classroom.

In the data from T1's classes in the last two weeks, in S1's appropriation, he tends to actively initiate mediation sequences from the language teacher (e.g., Excerpt series 4.3 and Excerpt 4.17 in Week 3, Excerpt series 4.4, 4.6 and Excerpt 5.6, 5.7 in Week 4). In addition to the reciprocity and imitation mechanism which has already been appropriated in S1's learning repertoire, in these instructional interactions, S1 initiates mediation from T1 when he encounters the L2 problems rather than receiving corrections and modelling until the teacher intervenes. This change has well demonstrated that S1 develops more sensitivity and control on the L2. His understanding of the L2 is not solely subject to other-regulation from the teachers, but he actively engages in lengthy co-regulation conversation with T1 to negotiate the L2 linguistic meanings and use (e.g., Excerpt series 4.6 and 4.7, and the micro-development of the grammatical structure in Chapter 5).

S1 starts to utilise a strategy to co-regulate the classroom interaction with the teacher. He first initiates interaction through a clarification request which elaborates on his current understanding of the L2 forms, meanings and concepts to invite the teacher for evaluation. Then the clarification request is immediately followed by an L2 sentence which embodied his

hypothesis of the L2. This strategy to initiate teacher evaluation has been repeatedly observed in the classroom data. For example, in Excerpt series 4.3 and 4.4, Excerpt 4.12, 4.17 and 5.4, it can be argued that through this particular co-regulation strategy, S1 has been constantly processing the L2 knowledge, meanings and concepts. Moreover, his exemplified sentences are the evidence that he is interpreting, making judgements, manipulating and gaining the ownership of the L2 (Dunn and Lantolf, 1998; Wertsch, 1998; van Compernelle, 2015). He demonstrates the awareness of the L2 and progresses to include the L2 knowledge in his dynamic linguistic and interactional repertoire.

S1's development from a recipient of mediation to an active participant of co-regulation, in this sense, is undergoing a qualitative, transformative process (Lantolf, 2000a). As SCT researchers argue that internalisation and development transcend the mastery of L2 linguistic properties to entail the ownership and ability to manipulate the L2 at all aspects (Dunn and Lantolf, 1998; Wertsch, 1998; van Compernelle, 2015), S1's change from a recipient to an active learner shows the process of internalisation and development. This finding is similar to the changes of an advanced L2 learner of English's L2 interactional competence during seven months' observation in an Australian university context (Barraja-Rohan, 2013). This similarity suggests that in an affordance-rich context as such created by T1 in the current study, the L2 beginner has the potential to develop classroom interaction competence (Walsh, 2012, 2013) which in turn benefit their internalisation of the L2. This potential is not exclusively available to advanced learners who have had more control over different aspects of L2.

Compared to the first two weeks, S1 in Week 3 and Week 4 is not confined and regulated by language use and interactional moves of the teacher only. Alternatively, he is showing the ability of co-constructing instructional conversations. It is illustrated from the classroom data that through this self-initiation and co-regulation process discussed above, S1 and the T1 work closely and dialectically within his ZPD, from which he gains new insight and modifies his original problematic hypothesis about the L2. It is only in this co-constructed instructional conversation that can S1 internalise the affordances made available and moves from the status of other-regulation gradually to autonomous self-regulation of the L2 (Heritage, 2018).

6.3.3 L2's dialectical function and the emergence of L2 interactional competence

In Section 5.5, Chapter 5, the analysis traces S1's changing and unstable ownership of the L2 structure 'zenme shuo...', which is the equivalent of 'how do/would you say...'. The use of this pair of structures by T1 and its developmental trajectory in S1's interactional moves, as well as its impact on the learner's L2 learning has been presented in detail. SCT argues that language, as the most vital means of mediation for human higher mental functioning (Lantolf and Thorne, 2006), mediates human behaviours on ontogenesis and microgenesis (Vygotsky, 1978, 1986). Through the use of linguistic resources, individuals collaborate with others to shape their activities and understandings (Lantolf and Appel, 1994; Scollon, 2001). In the language classroom, L2's dialectical function (Bodker, 1997; John-Steiner, 2007; van Compernelle, 2015) determines that on the one hand, it is the learning object which needs to be internalised; on the other hand, it is the means and tools for internalisation of knowledge. The micro-development of 'zenme shuo...' is the demonstration of such dialectical function of the L2 in this particular classroom.

The structure 'zenme shuo...' is frequently used during the everyday instruction in this CFL classroom. The teacher T1 has been consistently and recurrently utilising it in her teaching repertoire to elicit L2 responses from the learners. Through the interaction, in which the structure is embedded, the learners gradually appropriate and internalise it into their own L2 repertoires. It is observed in the classroom data that many learners use the same structure to initiate help and elicit answers from the teachers or peer learners. Among those learners, S1 also starts using the structure to complete similar L2 classroom interactional goals.

It is from the teacher-learner interaction that the teacher's conscious and recurrent use of the structure becomes an affordance. The conscious and recurrent use provides learning opportunities for the learners to know how the particular linguistic knowledge and properties, which is the learning object here, is operationalised in the context as psychological tools to fulfil interactional goals (Mitchell and Myles, 2004). Meanwhile, the linguistic knowledge and properties which internalised from interaction are re-used and recycled by the learners as

psychological tools to mediate their learning of other new L2 linguistic knowledge.

The micro-development of the L2 lexical item 'shui (tax)' (Section 5.2, Excerpt 5.1-5.3) is another example of the operation of L2's dialectical function in the language classroom.

During the interaction, T1 mediates S1 on the meaning and use of the target lexical item. In a few minutes' time, S1 becomes able to reuse the linguistic resources internalised to express his own opinion in subsequent peer-interaction. The empirical evidence provided in the analysis of S1's micro-development, strongly supports the central argument of SCT that learning is originated from socially co-constructed interaction, which dialectically connects the external-social and internal-psychological process, as the driver and source of L2 development (Frawley, 1997; Kozulin, 2003; John-Steiner, 2007; Lantolf and Thorne, 2006; van Compernelle, 2015, 2011).

Empirical evidence presented in Chapter 4 and Chapter 5, elucidate that effective mediation ensures the quantitative and qualitative accumulation of L2 knowledge. Furthermore, goes beyond the knowledge accumulation, mediation provides opportunities for the re-organisation of the mental process (Wertsch, 1985, 2007), which ultimately help the learners to move to a new developmental level within the ZPD. Regarding S1's development of the L2, the micro-development of 'zenme shuo...' gives a glimpse to language learners' emerging L2 interactional competence.

van Compernelle (2015) has argued that mediation facilitates the development of interactional competence (see Young, 2013; Hall, 1999; Hall et al., 2011; Young, 2011; Cekaite, 2007), meanwhile, the interactional competence also acts as mediational resources for language learning. S1's micro-development of 'zenme shuo...' is a sign of emerging L2 interactional competence at the early stage of L2 learning. It is arguable that with the mediation provided during the interaction, an L2 beginner has the potential to develop the L2 competence to conduct interactional behaviours even with limited L2 proficiency. Pekarek Doehler (2018) categorises such L2 competence as grammar-in-interaction. She reports that the premise of grammar-in-interaction to be part of learners' interactional competence, is that the relevant

grammatical forms (e.g., the languages used to conduct interactional behaviours) should already be part of the learner's L2 repertoire. The empirical evidence from her study shows that the advanced learner at the rather late stage of L2 learning and development demonstrates such interactional competence.

Relate to the current research, a learner like S1, with relatively limited L2 learning experience (five months), is learning the L2 in a context, in which the opportunities of L2 genuine interaction outside the classroom is scarce. With the affordances made available in classroom interaction, S1 gradually gains the ability to utilise the newly appropriated L2 grammatical forms to regulate his own classroom behaviours of eliciting help. Although S1's psychological control of the language is pre-mature as Chapter 5 has analysed, his interactional behaviours regarding the change and use of 'zenme shuo...' arguably shows the potential of 'grammar-in-interaction'. Therefore, S1's L2 interactional competence emerges at the early stage of L2 learning rather than in the later stages in which the relevant linguistic resources are already in place. While the learning context can provide rich affordances and mediation as T1 does in the current study, L2 beginners like S1, has the potential to develop L2 interactional competence for grammar-in-interaction.

6.4 L1 as a psychological tool for mediation

The use of L1 has been heatedly debated within SLA domain, but recently more and more researchers have realised its importance in second language learning and development (Turnbull and Dailey-O'Cain, 2009). It is observed that L1 use is pervasive in this beginner's classroom (see Section 4.5, Chapter 4) in both teachers' classes. SCT considers language as one of the most important cultural artefacts human beings employ to mediate higher mental functioning (Vygotsky, 1978, 1986; Frawley and Lantolf, 1985). Hence both L1 and L2 as linguistic resources are pivotal psychological tools to serve mediational functions for L2 development in the classroom context (van Compernelle, 2015; Vygotsky, 1978; Lantolf and Thorne, 2006; van Compernelle, 2014). Especially in the beginners' classroom when teachers and learners are sharing the same L1, L1 has been considered as a significant linguistic and cognitive affordance for L2 learning and development (van Lier, 2000; Levine, 2009).

In this CFL classroom, both teachers incorporate L1 in their teaching toolkits. In Section 4.4, interactional examples depict the main mediational functions of both teachers' L1 use:

- to provide L1 equivalents to elicit learners' L2 products (Excerpt 4.8)
- as a complementary explanation for the L2 (Excerpt 4.9)
- to suggest 'possible value' (Antón and DiCamilla, 1999) and create a context for the use of new L2 forms (Excerpt 4.10)
- to give the metalinguistic and metacommunicative explanation (Excerpt 4.11 and 4.12)

It should be made clear that L1 as a powerful psychological tool (Lantolf and Thorne, 2006; Thorne and Lantolf, 2007), serves numerous functions. According to the idiosyncratic nature of classroom teaching, the mediational functions of L1 can be an endless list. Thus the L1 mediational functions presented in Chapter 4 and Chapter 5, display and focus on the most frequent and powerful ones. Among these mediational functions, both teachers use L1 to provide metalinguistic explanations when it is necessary. The finding coincides with numerous studies on L1 use in L2 classrooms that L1 is effective and time-saving in metalinguistic-related activities. The rationale is that L1 use avoids involving L2 metalanguage and unfamiliar linguistic terminology (Turnbull and Dailey-O'Cain, 2009; Turnbull, 2001; van Compernelle, 2015; Walter and van Compernelle, 2015).

The grammar lecture T2 is a native speaker of English, who shares the same L1 with most of the learners in this CFL classroom. The grammar lecture usually involves complex and lengthy grammatical explanations, in this case the L1 helps the teacher to construct the L2 knowledge to be more accessible to learners (Swain and Lapkin, 2000; Cameron, 2001; Raschka, Sercombe and Chi-Ling, 2009; Swain *et al.*, 2009b; van Compernelle and Henery, 2014; Walter and van Compernelle, 2015). Other mediational functions of the L1, such as elicitation, creating linguistic contexts and giving the complementary explanation of L2, bridge the links between the L1 and L2, raise the learners' awareness to solicit their L1 as a psychologically indispensable tool to deepen their understanding of the L2 meanings and forms.

While at the interpsychological plane, L1 is a powerful tool for co-constructed knowledge-building, at the intrapsychological plane, the focal learner often resorts to L1 in the form of private speech to regulate the thinking process when he encounters challenging language tasks which currently beyond the ZPD (John-Steiner, 2007). In Chapter 4, the analysis also focuses on how private speech is used at the intrapsychological level to regulate S1's thinking when he is confronted by unfamiliar vocabulary and encounters difficulties in word-search.

At the time the data is recorded, S1 has been learning the language for five months, without prior formal learning experience of Mandarin Chinese. Thus with a relatively low L2 proficiency, most of S1's private speech observed in the data is carried out in L1 English. This finding collaborates with the findings reported by Abadikhah and Khorshidi (2013) and Jimenez-Jimenez (2015), by which they argue that the use of L1 as private speech is dependent on learners' low L2 proficiency. In both cases presented in Chapter 4, L1 private speech externalises the learner's thinking process. In the first example, the private speech in the form of elliptical questions reveals his L2 problem to be the repeated lexical item, and in fact, guides him to focus on solving the problem of the lexical meaning and pronunciation of the target L2 word. In the second example, the private speech also in an elliptical form, distance him from the task (Frawley, 1997) to focus on the word-search. The evidence shows that, in the cognitively challenging language tasks, through private speech, the learner externalises the thinking process, uses the L1 as a psychological tool to regulate and orient to his own behaviours (Frawley and Lantolf, 1985). Hence, private speech is facilitative to the comprehension (e.g., Excerpt 4.13), meaning-making and production of the L2 (e.g., Excerpt 4.14), which in lines with the recent research of L1 private speech (Wang and Hyun, 2009; Storch and Aldosari, 2010; De Guerrero, 2018).

Researchers find out that learners' private speech is usually ignored by language teachers, that they do not pay attention to information revealed through learners' private speech (Ohta, 2001a; Centeno-Cortes and Jimenez-Jimenez, 2004; DiCamilla and Antón, 2004). The interaction documented in Excerpt 4.14 proves otherwise. The video-recording shows that

when S1 is producing the L1 private speech in the word-search activity, although T1 does not intervene, she is attentively listening and nodding. The teacher is consciously paying attention to learners' linguistic and interaction behaviours. Later in the interaction, when the learners in the group expose that they could not find the correct lexical word for 'tax', T1 then chooses to provide the support. The teacher's move in this episode shows that T1 gains the signals of S1's intended meaning which is revealed through his struggling private speech. It can be argued by this example that learners' private speech could be attended by language teachers for mediation opportunities.

Nonetheless, this is the only example of teachers' conscious attainment of learner private speech in this research. More research and empirical evidence are still needed for language teachers' perceptions, awareness and judgements towards learner private speech. This is a gap in pedagogy which worth the attention from both researchers and language teaching professionals.

6.5 Gesture as a mediational dimension

The gesture employed by language teachers during teacher-learner interaction provides an imagistic realisation of the linguistic structures and meanings (McCafferty, 2002). The ecological perspective of language learning argues that how participants of a specific interaction mediate their understanding, create identities, self-regulate the ongoing activity has connected to affordances available in the context for them (van Lier, 2000). In accordance with the ecological view, gesture in SCT is an important sociocultural artefact, a vital dimension of human interaction and a powerful affordance in the classroom context. It has been revealed to function as an important semiotic resource in L2 teaching and learning contexts (see Lazaraton, 2004; Zhao, 2007; Roth, 2002; Sime, 2008; Smotrova, 2014; McCafferty, 2008).

In the current study, the analysis and discussion of gestures as mediation put the emphasis on those gestures that align with the linguistic and paralinguistic resources in grammatical explanations. The findings indicate that when the recurrent gestures and the speech mutually

and precisely orient to the same semantic and grammatical meanings, by visualising the meanings, gestures along with the linguistic and paralinguistic resources, emphasises all those meanings for the L2 learners. As McNeill (1992, 2005) suggests, at this moment, gesture and speech co-express the meanings, create shared symbolic and mental space between learners and teachers. It is clearly shown in the data that when this shared symbolic and mental space is created by the speech-gesture alignment, the gesture, acts as the extra information redundancy (Hudson, 2011), emphasises the crucial meanings for the understanding of the L2 forms (e.g., Excerpt 4.15 and 4.17). The focal learner's responses clearly support the conclusion that the involvement of gestures, as researchers argue (Sueyoshi and Hardison, 2005; Lazaraton, 2004; Sime, 2006, 2008), is an important mediational component. It improves teacher assistance, thus benefits the learner's understanding of the language.

On the contrary, the use of gesture is not always facilitating the understanding of the L2 forms and meanings. In some cases, the involvement of gesture is obstructing L2 learners' conceptualisation. When a gesture is unable to orient to the same semantic and grammatical meanings with speech, the shared symbolic and mental space could not be created, let alone to highlight the crucial meanings for language learners. Furthermore, under such circumstances, the involvement of the gesture causes cognitive confusion in classroom activities. The findings of the gesture-speech alignment presented in Excerpt 4.16 are the example of such mismatch between gesture and speech.

While contrasting two semantically and grammatically similar linguistic items, in Excerpt 4.16, the teacher utilises the same gesture to refer to the two linguistic items interchangeably. The gesture orients to the similarity between two linguistic forms, while the speech keeps emphasising the divergence between them. As the particular gesture is repeatedly used for several times by the teacher, it strongly emphasises the similarity rather than explicating the difference of linguistic items for the learner. The mismatch between the gesture and speech consistently creates cognitive understanding problems, which is evident in S1's repeatedly initiated clarification requests and lengthy discussions about the differences between two lexical items. The evidence from the analysis supports Faraco and Kida's (2008) observation

that when the gesture aligns with the repetition of difficulties rather than the correction, it often creates ambiguity. In Excerpt 4.16, after the repeated mediation sequences initiated fail to address the L2 problem, at last, T1 chooses to change the means and resources from gesture accompanied explanation and example sentences to speech-only metalinguistic explanation, which solves the L2 problem for the focal learner.

Through the data collection, S1's use of gesture-mediated learner uptake of teacher gesture has not been observed in the learning activities. Therefore it can be argued that for S1 in particular, gesture-speech alignment is an insightful mediational resource and affordance available in the classroom, but at the moment, S1 has not appropriated and internalised the gestures into his own semiotic toolkit for language learning.

6.6 Pedagogical implications

The current research conducts detailed microgenetic analysis on the provision of teacher mediation and how the mediation is appropriated by an L2 Mandarin Chinese learner to facilitate his L2 learning and development. It is posited in a CFL classroom at the tertiary level in a UK university. The findings from this research demonstrate the learning opportunities created by different mediational practices and affordances in the classroom. Moreover, it probes how these practices, strategies and affordances intertwine in the classroom interaction to contribute to the focal learner's L2 learning and development. Thus this study shed light on broadening the understanding of CFL classrooms in UK universities. There are a number of implications for L2 Mandarin Chinese pedagogy in CFL contexts, which are similar to the one in the current research.

First, in a broader sense, the study informs the CFL research area which still hitherto profoundly focuses on the acquisition of the linguistic properties of Mandarin Chinese. The attention of CFL teachers and practitioners could be drawn to the dynamism of the teacher-learner interaction and raise their awareness of the essential and crucial role of interaction and mediation in the language classroom. This may potentially improve the quality of classroom L2 Mandarin Chinese teaching, to treat and use the classroom as the premise for L2

interaction, especially for CFL contexts, in which opportunities of genuine L2 Chinese interaction are scarce outside of the classroom.

Second, from a practical point of view, implications could be proposed to the classroom teaching. The findings of the current research draw a comprehensive picture of the classroom interaction in which the L2 learning is co-constructed by the teacher as well as the learner. An affordance-rich classroom environment could benefit learners with a variety of learning opportunities to engage in co-regulated and negotiated activities. When learners encounter L2 problems which render them incapable of completing learning tasks, teachers should provide contingent and strategic assistance which helps learners to transcend the simple completion of the task, to develop the L2 competence to operationalise the language independently in future. The strategic assistance could be fulfilled through extended teacher wait time, asking probing questions, the optimal use of both L1 and L2 in prompts and metalinguistic/metacommunicative explanations, using DIUs to give hints to learners, and contextualising the L2 knowledge, to name a few. Those interactional moves and assistance could strategically create rich affordances and learning opportunities for learners to understand, practise and explore the meanings of the target language. Particular attention should be drawn to the teaching of L2 Chinese grammar. A more interactive approach needs to be developed to foster L2 learners' understanding of grammar rules and concepts.

According to the findings, the teachers in this CFL classroom have not shown sufficient sensitivity to the focal learner's interactional behaviours in the classroom. The suggestion is to raise language teachers' awareness about the identification of learners' dynamic ZPDs then contingently respond to their changing needs. In addition, the often neglected elements in class, such as learners' private speech, should be consciously taken into consideration by teachers.

As an increasing number of studies have been advocating the pivotal role of gestures in L2 learning and development, L2 Chinese teachers are suggested to consciously focus on their use of gestures and other non-verbal means in the classroom. The misuse of the gesture might

hinder the creation of learning opportunities as well as learners' understanding of the L2 knowledge and concepts. It is worth noting, especially for learning contexts in which teachers and learners do not share the same cultural background, that some gestures are cultural-specific, their meanings and connotations might be different in learners' culture. Hence, they could cause confusions among learners. This requires teachers to become aware of the cultural-specific gestures during lesson planning and classroom teaching.

Furthermore, this study has suggested that even at the early stage of L2 learning, the learner demonstrates the potentiality of the emergence of L2 interactional competence, which is deeply derived from the recurrent use of the L2 in the teacher's teaching repertoire. The L2 classroom is a multilingual place, in which learners need to be competent L2 users (Levine, 2011). There is a practical need to teach some L2 expressions for interactional behaviours, such as clarification requests, confirmation checks and self-initiation, such as T1 does in the current research. The learning and mastery of this kind of L2 structures and expressions ultimately benefit learners' L2 linguistic and interactional competence.

Finally, as stated in the introduction chapter, the teaching and learning of Mandarin Chinese in the UK, faces the urgent problem of lacking qualified teachers. Although there is only a limited number of teacher education programmes specifically designed for L2 Mandarin Chinese in the UK, the design of the programmes needs a re-examination. Instead of emphasising the importance of various teaching techniques and strategies, the importance of teacher mediation and interaction in the classroom, as well as the aforementioned pedagogical implications should be incorporated into L2 Chinese teacher education programmes.

6.7 Summary

This chapter re-examines and discusses the research findings of the microgenetic analysis presented in Chapter 4 and Chapter 5 in relation to the research question and relevant literature. The analysis of the mediation and its provision in this particular classroom shows that from an SCT perspective, mediation is processed by the language teachers and learners through the contingent use of a variety of linguistic, interactional and semiotic resources.

These resources intertwine with each other and function in the interactional practices of scaffolding and co-regulation, create an affordance-rich interactional context for different teaching and learning activities. The mediational processes are contingently co-regulated by both the teachers and learners. In the mediational process, the learner actively involves and engages in the co-regulation and mediation—re-mediation circles to appropriate the L2 knowledge and co-construct his L2 learning experiences. Through the appropriation of the mediational assistance, the learner shows the emergence of L2 development and classroom interactional competence.

In the final part of this chapter, the research findings and the discussion has been related to the L2 Chinese classroom pedagogy. This study suggests that teachers of L2 Mandarin Chinese and L2 Chinese teacher training programmes need to shift the imbalanced attention from the teaching of specific linguistic components of the L2 to the pivotal role mediation plays, and its dynamics in the classroom interaction.

Chapter 7. Conclusion

In the final chapter of this thesis, through the review and reflection of the data analysis and research findings, the limitations and contributions of the present study will be discussed. Based on the reflection, recommendations and directions for future research are also addressed to conclude the thesis.

7.1 Key findings revisited

The principal aim of this SCT study is to investigate how classroom interaction serves the mediational functions in learning activities in a CFL classroom in the UK. On the one hand, the research focuses on the role of sociocultural constructs in L2 learning and development, such as mediation, ZPD, regulation and internalisation. On the other hand, this research is interested in finding out how the learner through the use of variant interactional resources, appropriates the mediation embedded in classroom interaction. Employing the microdiscourse analysis approach (van Compernelle, 2013, 2015), the microgenetic analysis of the naturally-occurring classroom interaction answers the overarching research question that how learning is mediated in this CFL classroom during one particular learner's L2 development.

The findings suggest that in this particular context, the mediation is processed by language teachers and the learner through the contingent use of multicity of linguistic, interactional and semiotic resources. These resources, to name a few, involve the words, structures, grammatical rules, concepts and knowledge in both L1 and L2, the turn-taking mechanisms, probing questions, wait time, DIUs and the paralinguistic and semiotic dimension of the human interaction—gestures, as well as postures, prosody and intonations. These resources are interconnected to function in the mediational practices of scaffolding and co-regulation. Through the scaffolding practices and the reflexive co-regulation loop which activate and make variant affordances relevant and available in the classroom, the teachers and the learner co-construct the learning experiences. Moreover, in the co-construction of knowledge and experiences, the teachers and the learner display their classroom interactional competences (Walsh, 2006, 2011, 2013).

As an active participant in the language classroom, the focal learner appropriates and internalises the affordances in classroom activities for the purpose of learning and development. As SCT points out, in this classroom, concerning the form-focused mediation, imitation is a means of efficacy to appropriate the L2 forms. Through the precise and creative imitation of the teachers and peers' modelling and contribution, the learner appropriates and internalises L2 forms and knowledge. Relying on interactional resources such as co-regulation, initiation assistance and testing L2 hypotheses, the learner gradually undergoes a process from being the recipient of knowledge input to improved learner agency in T1's classes during two months' time. His appropriation, internalisation and micro-development contribute to the emergence of L2 interactional competence at the very early stage of L2 acquisition.

7.2 Limitations

Drawing on the microgenetic analysis of classroom interaction, the process and impact of mediational practices in this particular classroom are revealed. It is important to recognise the limitations of the present study, thus its findings could be properly evaluated.

First, concerning the research design of this study, adopting a single case study approach to the classroom interaction, the present study investigates the learning process of one L2 Chinese learner with two language teachers in a particular L2 Chinese classroom. The case study design of the research guarantees the in-depth analysis of the complex and dynamic classroom interaction (Cohen, Manion and Morrison, 2011; Yin, 2014), it also shares the limitations and constraints of the general qualitative case study approach. The approach determines that the findings of a particular case are not generalisable to other contexts or wider population as the quantitative research approaches do (Thomas, 2011; Yin, 2014). The findings of a case study can serve as empirical examples for other researchers in the field and contribute to the generation of new theories (see Merriam, 1998; Flybjerg, 2006; Foreman-Peck and Winch, 2010; Yin, 2014) (also See Section 3.4 and 3.9 for detailed discussion of the strengths and limitations for case study approach).

Second, constrained by the practicality, this study observed and recorded four weeks' classroom interaction across two months' time, with the Easter holiday between the first and second phases of the data collection. Although SCT aims to decompose individuals' development, with only four weeks' data in two months, it is possible to trace the emergence of the microgenetic development of the particular learner, but it is not long enough to trace the learner's ontogenetic developmental trajectories. In addition, the classroom instruction was interrupted by the Easter holiday, which might have some impact on the learner's language learning and development in the classroom activities.

For the current research, the research findings drawn from S1's learning activities can only reveal the particular learner's L2 learning and development in-depth during the time observed. The observation and analysis of other learner(s) in different learning environment(s) might lead to divergent findings. Thus the findings and interpretations are not generalizable to all L2 Chinese classrooms in CFL contexts or to all the L2 Chinese classrooms in the UK.

Nonetheless, the limitation on generalisability and limited data do not constrain the broader relevance and significance of this research. Rather, the findings and implications inform the teaching and learning in similar contexts: L2 English learners of Chinese in Chinese degree programmes in UK universities. In the field of CFL teaching and learning, there is a need for more empirical understanding of the under-researched L2 English learners of Chinese in higher education institutions. The findings of this research help to generate new theories about the development of L2 English learners of Chinese. Furthermore, other researchers who are working on teaching and learning of the less commonly taught languages (e.g., Chinese, Japanese, African languages and indigenous languages) also may find resonances from the findings of this CFL case study.

Third, the study is interested in the learning and development which take place in naturally-occurring and socially co-constructed learning activities within learner's ZPD. It aims to examine how participants of classroom interaction negotiate the interaction in learning activities. Adopts an emic perspective towards the data, this study orients to the classroom interaction as they are made relevant to the pedagogical activities by the participants

contingently. For this research focus and purpose, the most adequate data is genuine classroom interaction. Thus, the present study does not include teacher and learner interview as the data. However, an interview acts as the complementary data source for the naturalistic interaction, might be able to elicit information on participants' beliefs and perceptions about the mediation and affordances in the class, and make more claims to understand teachers' pedagogical decisions and behaviours as well as learners' appropriating and internalising strategies.

7.3 Contributions and implications

Although the limitations exist, this is an imperative study of value from different aspects. The investigation and the research findings contribute to the research area of L2 classroom interaction and classroom discourse in general, broaden the empirical database of L2 teaching and learning in formal classrooms.

Guided by SCT's principles and constructs, this study has scrutinised the mediation embedded in scaffolding and co-regulation practices. The findings from the scrutiny reveal the dynamics in language classroom interactions, which create the rich affordances (see van Lier, 2000, 2004; Miller, 2005; Darhower, 2008; Thoms, 2014) for learner's further appropriation. The comparisons between T1's affordance-rich classroom and T2's affordance-constrained classroom, confirm the previous findings drawn from the L2 English and L2 Spanish learning contexts (Miller, 2005; Darhower, 2008; Thoms, 2014) that a classroom which affords rich opportunities for learners to comprehend, clarify and negotiate meanings, promote knowledge-building and meaning-making. The analysis and discussion between the 'match' and 'mismatch' of affordances in teacher mediation and their consequences in learner appropriation contribute to the existing knowledge on classroom affordances, deepen the empirical understanding about the reflexive relationships between affordances, learners and learning environments (van Lier, 2000, 2004).

The mediation sequences identified and analysed in Chapter 4 and Chapter 5 demonstrate that the participants in this CFL classroom deploy the interconnected linguistic, interactional and

semiotic resources at their disposal, to mediate learning experiences. Research on scaffolding practices in the ESL/EFL classrooms identify that through interactional moves such as directives, referential and assisting questions, wait time, repetition, recast, modelling and calling on other learners, teachers in different classrooms scaffold learners verbally and non-verbally (Adair-Hauck and Donato, 1994; Antón, 1999; Michell and Sharpe, 2005; McNeil, 2012; Lugendo, 2014). The findings regarding the scaffolding practices in this CFL classroom also discovers that those interactional moves are employed by teachers. Moreover, it is found out that in this particular CFL classroom, the scaffolding features and the multiple resources used to fulfil these features are closely related to the task-orientations and pedagogical focuses. This finding from a CFL beginner's classroom contributes to the operationalisation of the renowned scaffolding framework in the L2 language classroom.

This study has identified a mediation—re-mediation loop regarding the reflexive co-regulation (Vygotsky, 1962; Wertsch, 1991; Lantolf and Thorne, 2006; Mercer, 2011; Swain, Kinnear and Steinman, 2011; van Compernelle, 2015; Bailey and Heritage, 2018; Heritage, 2018) in the classroom, in which the learner displays his agency by actively participate in the learning and interactional activities. The reflexive loop helps the learner to constantly refine his dynamic ZPD, and negotiate with the teacher. It also facilitates the teacher for identifying the learner's ZPD. The co-regulation loop expands the understanding of the traditional notion of *negotiation for meaning* (see Long, 1996; Savignon, 1997; Gass and Mackey, 2006). More importantly, this study adds empirical evidence for co-regulation practices in the language classroom that it is not only negotiated and contingent (Aljaafreh and Lantolf, 1994; Antón, 1999) but it is also reflexive between teachers and learners.

The analysis of the classroom data reveals that the focal learner gradually become active in picking up and recycling the assistance and affordances in the classroom. The mediation is provided contingently and negotiated between the learner and the teachers within the learner's ZPD. These findings and observations from L2 Chinese classroom thus confirm the research claims in SCT area from other language classrooms that the development happens in the interpsychological plan in the interaction first, then moves internally to the intrapsychological

plane (Aljaafreh and Lantolf, 1994; Guerrero and Villamil, 2000; Jang and Jiménez, 2011; Van Compernelle, 2011; Smotrova and Lantolf, 2013; Lantolf and Poehner, 2014; van Compernelle and Smotrova, 2014; Bailey and Heritage, 2018; Heritage, 2018). In addition, with the empirical evidence from the research focuses on a language which is different with that of the existing literature, the current study shed light on the application of the SCT principled research in a relatively novel context. It supports a further understanding of the influence of mediation and interaction on learning.

Additionally, this study contributes to the knowledge body of learner's L2 interactional competence (IC) (Kramsch, 1986; Young, 2000, 2011, 2013; Young and Miller, 2004; Cekaite, 2007, 2009; Ishida, 2009; van Compernelle, 2011; Watanabe, 2017; Pekarek Doehler, 2018). Studies regarding learners' development of L2 IC mostly focus on the interaction and participation mechanisms of intermediate or advanced L2 learners of European languages (e.g., English, French, Spanish, German) (Modada and Pekarek Doehler, 2004; Ganem Gutierrez, 2008; van Compernelle and Williams, 2012; Barraja-Rohan, 2013; van Compernelle and Kinginger, 2013; van Compernelle and Henery, 2014; Walter and van Compernelle, 2015; Pekarek Doehler, 2018), who already appropriate the L2 grammar rules, concepts and knowledge. The learner's development of the emergent L2 IC in this study, on the contrary, from the SCT perspective, provides the empirical evidence from an L2 beginner's classroom to elucidate that L2 IC could emerge at the very early stage of L2 learning before the L2 knowledge and rules are well appropriated. Thus, this finding broadens the scope of L2 IC research.

The target language in the present study is Mandarin Chinese. As iterated in Chapter 1, although the provision of Mandarin Chinese is increasing in the formal education as well as in the private professional sectors in the UK, the L2 Chinese acquisition research is still a relatively new area (Zhang and Li, 2010; Zhao, 2011). This study, in contrast with the majority of the L2 Chinese acquisition research that focus on the acquisition of linguistic properties of the language (see Yuan, 1998; Yuan, 2004; Huang and Yang, 2004; Huang et al., 2007; Yuan, 2001; Zhao, 2006; Jin, 2009), focuses on the classroom interaction and its impact

on the learner's L2 learning and micro-development. The study contributes to the body of the knowledge of learning Chinese as a foreign language. Additionally, the present study also contributes to the understanding of the interactional organism and mediational mechanism of the L2 Chinese classroom. Although the present study posited in the beginners' L2 classroom, it could benefit other L2 Chinese classrooms at all proficiency levels at the tertiary level in the UK. The description and analysis of the classroom mediation sequences and mechanisms would be beneficial to shed light on how to construct suitable classroom instruction within learners' ZPDs. As a result, the findings and the pedagogical implications of the study open up the opportunities for collaboration between researchers and L2 Chinese teaching professionals.

Finally, considering the methodology, as a sociocultural research being interested in the process of learning rather than the product of learning (Vygotsky, 1978; John-Steiner and Mahn, 1996), this study has adopted the genetic method as the methodological principle for the analysis and interpretation of the data. The genetic method is a general guideline to conduct sociocultural research, but not a precise procedure for the analysis of data at the practical level. Researchers process the data through a diversity of approaches in SCT-informed studies (Ohashi, 2005; Hudson, 2011; Twiner, 2011; Lugendo, 2014; Alsowayegh, 2015). The present study adopts and adapts the microdiscourse analysis approach proposed by van Compernelle (2013, 2015) to investigate how learning is mediated in the CFL classroom context. Thus the present study has adapted and extended the application of the microdiscourse analysis approach to a PhD study, embodies a different interpretation of Vygotskian genetic method to investigate the empirical data of classroom interaction in more depth.

7.4 Future recommendations

The present study elaborates one particular L2 Chinese learner's learning and developmental process in two months, which is mediated by classroom interaction. As mentioned in the previous sections, the findings of the single case study could not be generalised to all L2 Chinese classroom contexts. Thus, future research could collect classroom data from larger

groups of participants, include more learners and teachers from different proficiency levels. Therefore, a more profound understanding could be drawn to explain the dialectical relationships between the mediation embedded in classroom interaction and the L2 Chinese learners' learning. This type of research will also provide a more holistic picture for L2 Chinese learning in the UK in general, contributes to the currently under-researched community.

SCT's genetic method proposed four research domains for research: phylogenesis, sociocultural history, ontogenesis and microgenesis, among which the ontogenesis and microgenesis closely link to L2 teaching and learning (Vygotsky, 1978, 1981, see Chapter 3 Section 3.3.1). The present study provides an account of how microgenesis is mediated. Further research on L2 development should focus more on learners' ontogenetic process, based on longitudinal data and analysis to provide more and clearer developmental evidence. Researchers working within the SCT framework need to keep exploring and developing alternative analytic approaches which are commensurable with SCT principles and methodology.

7.5 Final remarks and reflection

In this study, an L2 Chinese classroom at a UK university has been explored. Focusing on teaching and learning at the micro level, through the SCT lens, the data has provided an interesting picture of learning Mandarin Chinese as a foreign language. The interpretation of the classroom interaction in this particular module, provides a window for researchers as well as L2 Chinese teachers to the importance of teacher assistance and learners' L2 potentiality. Through conducting this research, I personally have a better understanding of the dynamics in the L2 Chinese classroom. The research community of L2 Chinese acquisition, within China and beyond, for decades, have been focusing and devoting to the explanation and explication of the acquisition of Chinese formal linguistic features. The acquisition routes of these linguistic features are indeed important and deserve to be well-researched. However, my personal experience of being an L2 Chinese teacher in China, and the research experience of observing and analysing data for this study, elucidate that in the L2 Chinese classroom, it is

the interaction and mediation that make the L2 accessible and create opportunities for development. The community of L2 Chinese acquisition needs to shift the attention to the classroom dynamics. I hope the findings of this study may draw the attention of the L2 Chinese teachers and researchers to explore similar contexts for future debate and discussion.

Appendices

Appendix A. Transcription conventions

(Adapted from Jefferson, G.(2004) ‘Glossary of transcript symbols with an introduction’, in Lerner, G.H. (ed.) *Conversation analysis: Studies from the first generation*. Amsterdam: John Benjamins Publishing, pp. 13-34.)

{ <i>translation</i> }	the words between braces <i>in italics</i> are English translation for original Mandarin Chinese (the first line is the word-to-word translation, the second line is the glossed English translation)
T1:	the language teacher
SS:	several or all learners
S1:	identified learner
S?:	unidentifiable learner
↑	a rise in intonation
↓	a drop in intonation
?	questioning intonation
(.)	notable untimed pause
(...)	longer untimed pause
(0.5)	timed pause
[point of overlap onset
]	point of overlap finish
=	latched speeches
-	a cut-off
::	starching of sound, elongated speeches
> <	speeded up speech, compared to the surrounding talk
< >	slowed down speech, compared to the surrounding talk
()	inaudible words, too unclear to transcribe
(guess)	words between brackets indicate researcher’s guess for unclear utterance

(())	movement or non-verbal interaction
<u>underline</u>	accentuated, stressed utterance
CAPITAL	something was said loudly or even shouted
°example°	low volume
°°example°°	much lower volume (e.g., whispering)
* *	words between the stars indicating mispronunciation
*	single star means the structure is ill-formed or not appropriate in target language
M	measure word in Mandarin Chinese
Q	question marker in Mandarin Chinese
MOD	modifier particle in Mandarin Chinese
POS	the possessive marker ‘de’ in Mandarin Chinese
N1	particle indicates the grammatical negative form ‘bu’, which means the action happened in the present or future
N2	particle indicates the grammatical negative form ‘mei’, which means the action happened in the past
SFP	sentence-final particle
PER	the perfective aspect marker ‘le’
DUR	the durative aspect marker ‘zhe’ and ‘zai’
EXP	the experiential aspect marker ‘guo’
(p)	the plural form of a noun(in translation)
EXT	the existential marker ‘zai’

Appendix B. Participant information sheet for the language teachers



Participant Information Sheet (for instructors)

PROJECT TITLE

Bridging the Gap—the constructs of sociocultural theory and learners' L2 development in the context of learning Mandarin Chinese as a foreign language: a Case Study in a UK University

INVITATION

I would like to invite you to take part in a research project. Before you decide, you need to understand why the research is being done and how you will be involved. Please take time to read the following information carefully. Ask questions if anything you read is not clear or you would like more information.

My name is Rui Zhang, a PhD candidate in Newcastle University.

You are being invited to take part in this research project regards on your teaching of Mandarin Chinese as a foreign language in the module 'Chinese Language 1B'. The primary focus of this project is how language learners of Chinese in a UK university, acquire the ability to use the language effectively in communication with others in the class. Since the teaching is inseparable from learning in formal learning context, the project is also interested in how your teaching helps and assists the language learners to develop this ability and use the language adequately. It also tries to describe the changes of this ability of the learners over a short period of time.

WHAT WILL HAPPEN

- The classroom interactions between learners and the language instructors in grammar class and other types of class will be video-recorded and observed by the researcher respectively each week.
- You do not have to do anything in particular. The researcher will not do anything to change the ways the classes are taught. You only need to prepare and teach your class as usual.
- This process will last around 4 months, from February to June 2015 (2nd semester in academic year 2014-2015).

PARTICIPANTS' RIGHTS

Your participation will be entirely voluntary. You have the right to stop participating at any time without giving any explanation.

If you do not wish to participate in this project, the sessions/classes taught by you will not be recorded as part of the data.

BENEFITS AND RISKS

The researcher cannot promise that the results of the research will help you about your teaching now. Optimistically, the results might be helpful for effective teaching of L2 Mandarin Chinese in the future. You might feel nervous and uncomfortable at the beginning of the recording and observation. Please ignore the recording devices as much as you can and behave as usual. You don't have to change your behaviour or teaching as your teaching methods and styles will not be judged by anyone under any circumstances.

Participant Information Sheet (for instructors)

CONFIDENTIALITY/ANONYMITY

All the participants will be kept anonymous in this project. Pseudonyms will be used throughout the recording, transcribing and analysis. The face and other identifiable features of you will be made blurred during the using of video frames from the recordings.

The recordings, transcripts, observational notes will be store on the researcher's hard-drive and another external hard-drive as the back-up, they will also be password protected.

FOR FURTHER INFORMATION

I will be glad to answer your questions and open to any suggestions about this project at any time.

Please feel free to contact:

Rui Zhang

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Appendix C. Participant consent form (for teachers)



Informed Instructor Consent Form

I, the undersigned, confirm that (please tick box as appropriate):

1.	I have read and understood the information about the project, as provided in the Information Sheet dated _____.	<input type="checkbox"/>
2.	I have been given the opportunity to ask questions about the project and my participation.	<input type="checkbox"/>
3.	I voluntarily agree to participate in the project.	<input type="checkbox"/>
4.	I understand that I can withdraw at any time from the participation without giving any reason. I understand I will not be penalized in any way for either participating or not participating in this research project.	<input type="checkbox"/>
5.	I agree that I will not penalize the students in any way for either participating or not participating in this research project.	<input type="checkbox"/>
6.	The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymity of data, etc.) to me.	<input type="checkbox"/>
7.	Separate terms of consent for participants, audio, video or other forms of data collection have been explained and provided to me.	<input type="checkbox"/>
8.	The use of the data in research, publications, sharing and archiving has been explained to me.	<input type="checkbox"/>
9.	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.	<input type="checkbox"/>
10.	Select only one of the following: <ul style="list-style-type: none"> • I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognised. • I do not want my name used in this project. 	<input type="checkbox"/>
		<input type="checkbox"/>
11.	I, along with the Researcher, agree to sign and date this informed consent form.	<input type="checkbox"/>

Participant:

Name of Participant

Signature

Date

Researcher:

Name of Researcher

Signature

Date

Appendix D. Participant information sheet (for learners)



Participant Information Sheet (for students)

PROJECT TITLE

Bridging the Gap—the constructs of sociocultural theory and learners' L2 development in the context of learning Mandarin Chinese as a foreign language: a Case Study in a UK University

INVITATION

I would like to invite you to take part in a research project. Before you decide, you need to understand why the research is being done and how you will be involved. Please take time to read the following information carefully. Ask questions if anything you read is not clear or you would like more information.

My name is Rui Zhang, a PhD candidate in Newcastle University.

You are being invited to take part in this research project focuses on your Chinese language learning. This project is interested in how language learners of Chinese in a UK university, acquire the ability to use the language effectively in communication with others in the class. It also tries to describe the changes of this ability of the learners over a short period of time.

WHAT WILL HAPPEN

- The classroom interactions between learners and the Chinese teachers in grammar class and other types of class will be video-taped and observed by the researcher respectively each week.
- At the end of this term, the 10-minute oral assessment will be video-taped. You will not be observed by the researcher during the assessment.
- You do not have to do anything in particular, you only need to participate in your classroom activities as usual. The researcher will not do anything to change the ways the classes are taught.
- This process will last around 4 months, from February to June 2015 (2nd semester in academic year 2014-2015).

PARTICIPANTS' RIGHTS

Your participation will be entirely voluntary. You have the right to stop participating at any time without giving any explanation. You will not be penalised for participating or not participating in this project.

If you do not wish to participate in the research, the sessions/classes you take part in will not be recorded and used by the researcher. (Anyone who refuse or withdraw participation in the project will not be recorded and they will not appear in the video as data.)

BENEFITS AND RISKS

The researcher cannot promise that the results of the research will help you about your study now. Optimistically, the results might be helpful for effective teaching and learning of L2 Mandarin Chinese in the future.

Participant Information Sheet (for students)

You might feel nervous and uncomfortable at the beginning of the recording and observation. You could try to ignore the recording devices as much as you can and behave naturally. You don't have to change your behaviours as your performance in the class will not be judged by anyone under any circumstances.

CONFIDENTIALITY/ANONYMITY

All the participants will be kept anonymous in this project. Pseudonyms will be used throughout the recording, transcribing and analysis. The face and other identifiable features of you will be made blurred during the using of video frames from the recordings.

The recordings, transcripts, observational notes will be store on the researcher's hard-drive and another external hard-drive as the back-up, they will also be password protected.

FOR FURTHER INFORMATION

I will be glad to answer your questions and open to any suggestions about this project at any time.

Please feel free to contact:

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Appendix F. Speaker information sheet



Speaker Information Sheet

Thank you very much for your participation in this research project!

The following questions are designed to gather some information about you and your Chinese language study. Please provide brief answers to the following questions:

1. Name:
2. Gender: male; female;
3. Age:
4. Nationality:

5. What do you consider to be your first language?

6. What is/are the language(s) that you speak or hear in your family/from your relatives?

7. What degree programme are you studying in this university? Which year/stage are you in?

8. Prior to the enrolment of this Chinese language module you are studying now, do you have any experience of learning Chinese as a foreign language? (If yes, please give some details about the experience, e.g. when, where, and for how long)

9. Prior to the enrolment of this Chinese language module you are studying now, do you have any experience of travelling, living or studying in any Chinese-speaking country? (If yes, please give some details about the experience, e.g. when, where, and for how long)

☺ 谢谢! 祝你学习进步! ☺

Appendix G. Extra material in the oral class, Week 1

Lesson

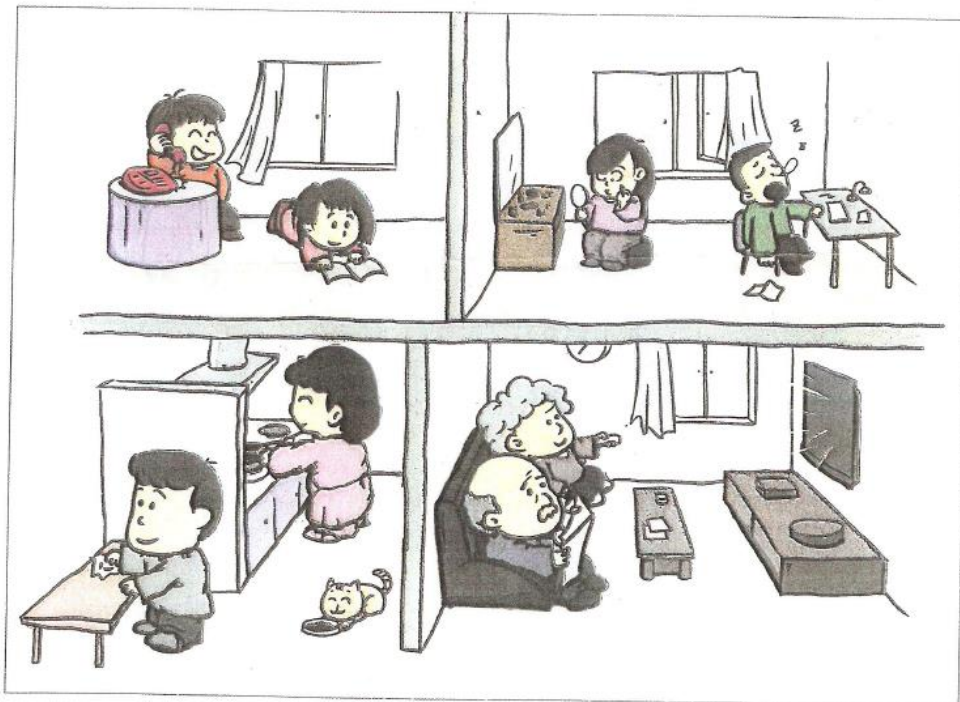
37

Tāmen zài zuò shénme

他们在做什么

What are they doing

听录音，然后回答问题：她家的小猫在做什么？
37-1 What's their little kitty doing? Listen to the recording and then answer the question.



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