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Autonomy and Technology in Language Learning

An Investigation into Hong Kong College Students' Personal Response towards a Technologically-Mediated Putonghua Programme

Autonomy and Technology in Language Learning:
An Investigation into Hong Kong College Students' Personal Response towards a Technologically-Mediated Putonghua Programme

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Abstract

This study attempts to scrutinize and gain insights into the nature of the relationship between autonomy and technology in the context of language learning, by capturing, collecting and evaluating Hong Kong college students' personal response to a technologically mediated Putonghua programme. Therefore, the focus of the study is to investigate the students' personal response to a technologically mediated Putonghua programme in terms of their blended lessons and free-time strand. Along this line, learner autonomy in relation to the use of technology is discussed, from which a division of proactive and reactive autonomy, individual and group autonomy are respectively illustrated. A self-financed community college in Hong Kong, the College of Professional and Continuing Education (CPCE), is applied as a case study.

In attempting to operationalize autonomy in the context of language learning mediated by a technological learning environment (TLE), two interconnecting tools are proposed to facilitate the capture and evaluation of instances of autonomy in action: one tool is the TLE autonomy framework adopted by Macaro (2007), which sets out a clearly defined set of criteria to collect, capture and categorize the types of autonomous student behaviour. The other tool is a conceptual framework for autonomous learning behaviour in a learning environment, which attempts to evaluate instances of autonomy from a theoretical perspective. Data collection involved two sources: semi-structured interviews and observations. Interview data were mainly gathered from the in-depth individual interviews as well as pair and focus-group interviews. Observational data were collected by observing the students' *CM* blended lessons and tracking their online activities in terms of the analysis of their online writing assignments and forum postings.

The main contributions of the study could be presented at three levels: at the theoretical level, distinguished from a simple causal link between technology and autonomy, the study advocates that the introduction of technology may reconfigure the social dynamics of the activity space and change the totality of relationships between individuals and the affordances they appropriate in the activity space, which requires a focus on ecological autonomy. At the methodological level, a learner-oriented research approach adopted in this study can help to understand if a gap is existed between learners' perceptions and actions. At the pedagogical level, in looking beyond matters of whether technology improves learning, the challenge for teachers, teacher educators, materials designers and software developers lies in recognizing, understanding and harnessing the pedagogical value that might be achieved from the transformative effects of the digitalized learning environment.

Dedication and Acknowledgements

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Author’s Declaration

I declare that the work in this dissertation was carried out in accordance with the requirements of the University's *Regulations and Code of Practice for Research Degree Programmes* and that it has not been submitted for any other academic award. Except where indicated by specific reference in the text, the work is the candidate's own work. Work done in collaboration with, or with the assistance of, others, is indicated as such. Any views expressed in the dissertation are those of the author.

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Chapter 1 Introduction

1.1 Background to the Study

The notion of autonomy is historically grounded in the political field of twentieth-century Western thought where it implies a sense of 'freedom from external control' (Benson and Voller 1997: 4) by a government, institution or group. Conceptually, autonomy carries a duality of meanings. On one level, autonomy might be understood cognitively as an individual's ability to chart 'his own course through life…according to his own understanding of what is valuable and worth doing' (Wall 2003: 308). This strand of autonomy could be described as 'internal' (Pennycook 1997: 36). On a second level, autonomy has an external dimension reflecting 'freedom from mastery exercised over oneself by others […] external, social and political freedom' (Ciekanski 2007: 112). In the eighteenth-century Western society, the concept of autonomy has evolved and 'increasingly emphasized the responsibility of the individual as the social agent' (ibid.). Autonomy thus can be conceptualized as having internal and external elements existing simultaneously, yet in tension with one another.

Although autonomy has deep historical roots in Western philosophies (Pierson 1996), autonomy in language learning is still a relatively new field, and various research started in 1970s (Little 1990; Benson 2001, 2011; Wall 2003). As the theory and practice of language teaching enters a new era, the importance of helping students become more autonomous in their language learning has become one of its more prominent themes. Currently, autonomy is widely accepted as a desirable goal in language education, and 'few teachers will disagree with the importance of helping learners become more autonomous' (Wenden 2001: 11). But autonomy is problematic not only to define, but also to operationalize and evaluate. This is reflected across the theoretical literature in Chapter 2 where conceptually diverse interpretations of the

notion are represented.

Autonomy lies at the heart of this study although it is an elusive construct to pin down and often confused with independence. The distinction was made by Deci & Flaste (2006: 89):

> *Independence means to do for yourself, do not rely on others for personal nourishment and support. Autonomy, in contrast, means to act freely, with a sense of volition and choice. It is thus possible for a person to be independent and autonomous (i.e. to freely not rely on others), or to be independent and controlled (i.e. to feel forced not to rely on others).*

In the light of the complexities associated with what it means to be autonomous, it is helpful to consider the two conditions proposed by Holec (1981: 7), which are that, for the learner to behave autonomously:

1. The learner must have the capacity to take charge of his/her learning; that is, he/she must know how to make the decisions.
2. There must be a learning structure in which the control over learning can be exercised by the learner; that is in which the learner has the possibility of exercising his/her capacity to take charge.

Holec's (1981: 3) broad definition of learner autonomy serves as a useful starting-point for closer scrutiny of the concept by the theorists (Pemberton et al. 1996; Benson and Voller 1997; Cotterall and Crabbe 1999; Sinclair et al. 2000; Little et al. 2000; Benson 2001). Wherever on the ideological spectrum the theorists locate themselves, the pursuit of autonomy in learning is acknowledged across the literature as pedagogically beneficial, because it is suggested that 'we learn better when we are in charge of our own learning because of cognitive, social and affective aspects

involved in the learning process' (Ciekanski 2007: 112). Apart from its pedagogical benefit, several arguments may be used in favour of developing autonomy in learners: for example, that autonomy is a learner right (Benson 2000), that autonomous learning is more effective than other approaches to learning (Naiman et al. 1978) and that learners need to take charge of their own learning to make the most of available resources beyond the classroom (Waite 1994). Furthermore, Ellis and Sinclair (1989: 2) argue the following:

1. Students who take control of their own learning are ready to learn, and learning is more effective.
2. Students who are responsible for their own learning can carry on learning outside the classroom.
3. Learning strategies can be transferred to other subjects.

In sum, autonomy has been identified as a pedagogical ideal such that it has achieved a 'buzzword status' (Pemberton 1996: 2), and with the increasingly presence of computers in education, it has been affiliated to technology. Technology can be interpreted in a variety of ways, but the notion of technology in this study refers to 'digital technology' identified by Kern (2006: 184), through which he primarily means computers rather than other forms of digitized media. In short, the technology described in this study is a technological learning environment (TLE), which should be discussed in length in Chapter 2.

It is suggested by Kessler (2009: 79) that 'one obvious benefit of technology for language learning is the creation of opportunities for students to use language in authentic contexts. Such activities encourage students to strive for autonomy in the target language'. It could be argued that technological functionality has the potential to enhance the learner's freedom to choose, demonstrating its effectiveness 'as a purveyor of learner autonomy' (Wall 2003: 308). The suggested relationship between

autonomy and technology has widespread appeal, but Hawisher & Selfe (2010: 56) caution against the 'uncritical enthusiasm' of technology and Lamy & Hampel (2007: 82) argue that 'for many of the positive aspects…there is a corresponding negative impact'. In other words, technological developments have not always delivered their intended benefits to end-users.

In recent years, the language education in Hong Kong has been going through a period of pedagogical transition with autonomous learning identified as a priority. Therefore, it offers a unique opportunity to research notions of autonomy, new classroom methodologies and technologically mediated learning opportunities. For instance, with the Hong Kong government's promotion of a 'biliterate and trilingual policy', a new language education incentive in 2001 recommended a realignment of priorities so that rather than focusing exclusively on formal aspects of language and translation, students are strongly suggested to work towards becoming competent learners and users of the target language.

In line with this trend, in Hong Kong the pedagogical approach to teaching Putonghua has evolved from the classic tradition of grammar-translation to a more communicative model (Manteca Aguirre 2006). A new pedagogical approach with communicative language teaching has been recommended so students can work towards becoming competent users of Putonghua, rather than focusing exclusively on formal aspects of Putonghua. However, such a paradigm shift has proved more difficult to achieve in practice. An exploratory study conducted across more than 100 secondary schools in 2011-12 revealed that students were still leaving secondary schools with poor Putonghua skills and unable to communicate in Putonghua (Yang 2013).

So far in Hong Kong there have been two schools of thought in teaching Putonghua exist in parallel, yet in conflict, each sharing a common belief in the value

of supporting the individual's potential for autonomy. One approach advocates that teachers should attempt to foster autonomy through practices in classroom. The role of the teacher is identified as crucial to promoting autonomous learning, with the classroom as the environment in which students can learn the necessary skills and through a series of effective classroom activities, working towards becoming more self-motivated lifelong learners. Many educational institutions in Hong Kong also have adopted this approach to self-directed learning as a component of classroom learning. The self-access centre supports and complements classroom teaching, as a means of promoting autonomous learning. Learners are guided towards a less dependent culture for learning, as educational institutions provide students with structured self-access learning pathways that are formally integrated into the syllabus, using the students' course book as a guide. This mode of self-directed learning is ultimately managed by the institution, so that the learners' potential for autonomy is determined and controlled by their context for learning and their teacher.

An alternative approach is the notion of self-directed learning that need not emanate from the classroom. The centre strives to support learners by stimulating the development of cognitive and metacognitive learning strategies and encouraging their capacity for reflection and self-evaluation through carefully designed learning materials and students can attend counselling sessions. Without the presence of the teacher or the existence of the classroom, students are faced with the cognitive and metacognitive challenges in managing their own learning. From the previous perspective, the development of learner autonomy is a component of classroom learning. By way of contrast, the latter perspective has evolved so that non-language specialists can engage with language education through self-access, enrolling, participating and learning at the time and pace that suits them. For the students in this study, the approach adopted by their institution corresponded to the previous one,

making it an ideal setting to introduce technology for use in the students' classroom.

1.2 Statement of the Problem

In recent years technology has been introduced as a means by which the learner can be liberated from suppression represented by the teacher-led classroom, providing linguistic opportunities in authentic contexts. Although new technology has the potential to liberate the language and the learner from the constraints of the classroom, it might have failed to deliver intended benefits to the learner. In other words, autonomous behaviour might emerge in response to a technological stimulus, but 'one cannot attribute the success…of a task solely to the medium of implementation' (Ganem Gutierrez 2006: 233).

Esch (2009) reflects that the integration of autonomy into educational practice appears to have been successful, but she argues that in the processes of mainstreaming, there has been some distortion in the interpretation of what it means to be an autonomous, especially after the introduction of technology. She considers one major and prevailing conception identified by Little (1991): technology is associated with self-access, where the learner is liberated from the external constraints of the classroom. The technology provides a clearly defined structure within which the learner can exercise control and chart 'his own course through life' (Wall 2003: 308), but he is guided by screen-mediated content and works in isolation. Actually this represents a diminished sense of what it means to be autonomous. This view of autonomy and technology overlooks language and learning as socially situated phenomena and the ways in which the structure of a TLE has the potential to create opportunities for the learner to exercise his potential capacity for autonomy.

Yet this conception fails to observe the element of interconnectedness between the individual and the learning structure that bring Holec's (1981) two conditions for

autonomy together. As an approach, this diminishes what it means to be autonomous by overlooking language and learning as socially situated constructs, in which students are the 'creative products of their social context' (Esch 2009: 43). In fact, autonomous learning mediated by technology has always been confused with learning in isolation and individualization. The relationship between autonomy and technology is more complex than this.

The provision of virtual space has the potential to bring learners and teachers together, with the promise and pedagogical value of effective online interaction in the target language. But Mason (2011: 69) found that, despite the apparent potential, 'simply providing an environment in which students and teachers could interact did not guarantee successful engagement', because of the need for the stimulus of human interaction. A virtual environment is simply an empty space because 'there are no inherent or necessary features of technological artefacts which lead to determinate social consequences' (Hutchby 2011: 20).

As mentioned earlier, Holec's (ibid.) two conditions point to the relationship between the internal and external dimensions of autonomy, reflecting the view held by Little that 'our essential condition is one of interconnectedness' (Little 2010: 7). An interconnectedness thus emerges between the individual's capacity for autonomy and the responsibility of educators to support learners' autonomy to create an environment in which learners can express and exercise their capacity for autonomy. The role of the teacher and a structure for learning cannot be overlooked. If, as Holec (ibid.) proposes, that there should be a structure within which the learner can exercise control, it seems that autonomy is possible in class.

I am interested in the notion of interconnectedness and the students' ability to express his potential capacity for autonomy, but this is in response to activities and interactions within the structure of a TLE. However, Dillenbourg et al. (2012: 5) point

out that ‘a set of web pages does not constitute a TLE unless there is social interaction about or around the information’. More importantly, as Mason (2011: 69) found, the provision of a TLE where students and teachers could interact was no guarantee of success. We thus see indications of the ‘reciprocal interconnectedness between internal processes and external environment’ (Shachaf & Hara 2012: 2).

Questions begin to emerge relative to the relationship between how learners perceive opportunities for autonomous learning in a technologically mediated context, and whether they choose to respond to those opportunities. Analysis of learners’ perceptions considered in parallel with their use of the technology should reveal something about what it is that transforms ‘potential effects into actual effects’ (Dillenbourg et al. 2012: 9) in the context of a TLE, which leads to the emergence of research aims in the next section.

1.3 Research Aims and Questions

There are three main aims in the study. The first of which is to review current thinking and examine the relationship between autonomy and technology from a theoretical perspective. A second aim is pedagogical because enhanced understanding about the effective integration of technology has the potential to inform teachers and educators and promote good learning. The third aim is research-based, looking beyond learning outcomes and instead taking a contextualized and ecological perspective (van Lier 2004) in the examination of interactions between participants in a technologically mediated language learning programme to see whether this might reveal fresh insights into the nature of the relationship between autonomy and technology.

In light of the concerns expressed by Ganem Gutierrez (2006: 233) that new technologies have ‘not always delivered their intended benefits’, it is necessary to

look beyond the question of whether technology leads to good learning where technological elements have been examined in isolation from the context within which they exist. The theoretical aim of the study is to examine how the introduction of technology impacts upon the dimensions and interconnectedness between elements in a learning environment in relation to autonomy. Closer analysis of examples of autonomy in response to technology should be considered in light of the context within which learning takes place. In doing so we enlighten our understanding of the nature of the relationship between autonomy and technology in a language learning environment, thereby allowing us to build a link between the two constructs.

Given the high level of investment associated with the introduction of technology, it is no doubt that the debate has focused predominantly on whether technology leads to better language learning, but to what end does an improved understanding of the relationship between autonomy and technology serve? This leads us to consider the pedagogical aim of this study. The value of autonomous language learning, whereby students are encouraged to learn and communicate autonomously in the target language is a valid pedagogical aspiration. Teachers, educators and researchers have identified technology as a platform which students might use to realize their potential for autonomy. It is evident that our attention has been drawn to its value in terms of pedagogical outcomes. In doing so we have failed to understand the significance and impact of introducing a socially situated tool into the language learning environment. It is dangerous in understanding the effects of learning in a digitalized environment. If, as educators, our aim is to create 'the conditions in which autonomy can flourish' (Benson 2009: 26), it is necessary that we have a clearer understanding about the nature of the relationship between autonomy and technology. Improved understanding will enable us to maximize the benefits of the technology for the learner, so that technology might be more effectively exploited to stimulate

autonomous learner behaviour.

In light of the suggestion that technology has not always delivered its intended benefits, the research aim of the study has been to evaluate how the introduction of technology into a learning environment impacts upon elements with which it comes into contact relative to instances of autonomy. Some studies have identified the significance of context in terms of learners' response to technology, adopting sociocultural theory from which to analyse the 'social and cultural situatedness of learner activity' (Kern 2006: 187). However, sociocultural theory adopts a more profoundly socio-constructivist stance, with an emphasis on the psyche of the individual. As an approach this does not address satisfactorily the interconnectedness between wider contextual factors in the learning environment, and the qualities brought by the introduction of technology. With this in mind, the ecological approach plays an important role in the study. The ecological approach embraces the 'totality of relationships of an organism with all other organisms with which it comes into contact' (van Lier 2004: 3) to see what this might reveal about the nature of the relationship between autonomy and technology in the context of learning Putonghua.

In the study I am concerned with the nature of the relationship between autonomy and technology so the purpose of this study is to look beyond the question of learning outcomes, matters about whether computer-assisted language learning improves learning and the effects of context on the learner. In other words, I am interested in taking a more holistic view of learning with technology, reflected in the two research aims of the study: 1) The interconnectedness between objects within a learning environment and how this relates to indications of autonomous behaviour. 2) How, and if, learners perceive and act upon technologically mediated opportunities for autonomy. Research questions are thus proposed as follows:

1. How and if did students perceive and act upon opportunities for autonomy within

a technologically mediated Putonghua programme?

2. What is the nature of the relationship between autonomy and technology within a technologically mediated Putonghua programme?

The purpose of the study is to gain insights into the nature of the relationship between autonomy and technology from an evaluation of learners' personal response to a technologically mediated Putonghua programme and to consider how far indications of autonomous behaviour might be influenced by the technology. The notion of 'personal response' is defined as the students' onsite activity and their reflections about the experience. In this study, students' personal response to the TLE is related to what they *did* and what they *thought* about the technology, to see what this might reveal about the nature of the relationship between autonomy and technology. The first research question is more descriptive while the second one is more theoretical and somewhat built upon the first one. The two research questions are thus supported by three specific questions in three chapters:

a. What were the students' perceptions and experiences of learning Putonghua with technology before the introduction of the TLE? (Chapter 4)
b. What were the students' personal responses to the TLE in their blended lessons? (Chapter 5)
c. What were the students' personal responses to the TLE in their free time? (Chapter 6)

The first specific question attempts to capture the baseline information that represents a rich source of comparative data for consideration alongside their subsequent response to the introduction of the TLE. The second specific question is to contrast students' perceptions of the value they attributed to the TLE with the reality

of their online activity in the blended classroom. Computer-mediated blended lessons has a characteristically familiar pedagogical format, but with free-time access, the outcome should become unpredictable with no guarantee that the students will even log on, raising the uncertainty in exploring the nature of the relationship between autonomy and technology. Therefore, the third specific question is to look beyond the boundary of the classroom into the more virtual terrain of the students' free-time use of the TLE. Based on the answers of three specific questions, the first research question successfully captures the students' a variety of response in the face of the opportunities for autonomy in a technologically mediated Putonghua programme. By analysing and comparing them relative to the concept of learner autonomy in a technological learning environment, the second research question on the nature of the relationship between autonomy and technology is examined in Chapter 7.

1.4 Overview of the Methodology

Given the complexity and multiplicity of interpretations of the concept of autonomy in Chapter 2, the difficulty lies in operationalizing autonomy, so making the transition from the pedagogical ideal to meaningful application in a learning environment. In attempting to operationalize autonomy in the context of language learning mediated by a TLE, two interconnecting tools are proposed to facilitate the capture and evaluation of instances of autonomy in action, mediating insights into the learners' personal response and interaction with the technology, creating a platform from which to work towards a better understanding about the nature of the relationship between autonomy and technology in language learning.

One tool is the TLE autonomy framework and its underlying principles are described in section 3.2.1. The framework sets out a clearly defined set of criteria to collect, capture and categorize the types of autonomous student behaviour one might

expect to observe in the context of a TLE. The other tool is a conceptual framework for autonomous learning behaviour in a learning environment. It required to evaluate instances of autonomy from a theoretical perspective, and is used as an instrument with which to build a better understanding about the nature of the relationship between autonomy and technology (see section 3.2.2).

The participants in the study all came from a self-financed community college in Hong Kong, the College of Professional and Continuing Education (CPCE). The study was focused on the CPCE students who have been attending a technologically mediated Putonghua programme of lasting 13 weeks. In this study, a technological platform that mediated the Putonghua programme known as *College Mandarin* (*CM*) was explored and developed on Moodle, a platform that is widely used across the educational community (see section 3.4).

Bearing in mind the relatively small college student population at the CPCE selected in this study—10 students—I felt qualitative methods of inquiry for the study would be conductive to producing significant data. Furthermore, the dimension of the students' personal response demanded an investigation based on a more flexible approach. In the study, CPCE students present their personal response towards a technologically mediated Putonghua programme, the qualitative approach is thus considered appropriate to capture participants' 'own experiences and lives as expressed in their own words' (Taylor & Bogdan 1984: 77).

Data were collected and examined from two dimensions of the learners' personal response to the TLE. The first dimension was interview data and the second was observational data. Interview data were mainly from the in-depth semi-structured individual interviews, as well as small pair and focus-group interviews, through which students were given the opportunity to discuss their preferences, attitudes and beliefs about the TLE, making it possible that the students could direct the flow of the

conversation, based on their own interpretations of events. The interviews were conducted between 5 June and 25 August 2017 due to the structure of the programme and the availability of students. Table 3.7 provides a brief summary of all interviews conducted with students throughout the three stages, which covered first-, middle- and later-phase of this programme (see section 3.6.1). More details of these interviews, in terms of number, form (group, pair or individual) and purpose/focus, could be found in Table 3.8 and Appendix C. The emerging accounts and descriptions from the interviews were cross-referenced with information obtained from informal conversations with other teaching and administrative staff.

Interview data enabled the capture of the students' perceptions of the TLE programme, but observational data provided another data source to corroborate what students *said* about blended lessons and free-time TLE access with what they *did* with the technology. Observational data were thus collected by observing the students' *CM* blended lessons and tracking their online movements around the technological platform. For example, each three-hour *CM* lesson was divided into two sessions: one-hour teacher-led session in the traditional classroom and two-hour session in the computer room. I chose to observe different sessions of eight *CM* blended lessons according to my own availability. Table 3.9 provides a summary of all observations in terms of timeline and type of session. (see section 3.6.3).

Data interpretive analysis ran concurrently as ongoing processes (Miles & Huberman 1984). Interview data were initially sorted into main categories, with finer subdivisions or codes under each category. This was followed by a thorough review of the data for patterns and themes, and for any paradoxes and contrasts (Delamont 1992), through which the earlier codes were refined and new ones developed. Observational data was analysed by interrogating a series of online student activities, in terms of student assignments and forum posts. Some examples of the students'

assignments and forum posts could be found in Appendix D. Such an analysis allows the researcher to witness whether students log into the site in their free time and they choose to respond to or ignore the 'affordance' (van Lier 2004: 3), creating a virtual observational presence and stimulating further lines of enquiry in interview.

My experience as a lecturer in CPCE has allowed me to keep in fairly close contact with students, so that gaining access to them was not difficult. I was actually well aware that as an 'insider' researcher, I would be bringing my own prejudices and judgements to the field. Therefore, I adopted a reflexive and critical approach to the interviewing which will be explained in Chapter 3. I believe that my relationship with the CPCE students was such that they were able to give voice easily to their thoughts, views and values.

1.5 Overview of the Chapters

In the chapters that follow, I begin by presenting a discussion of the literature. Chapter 2 is a discussion of the literature relating to autonomy and technology, which begins by considering the increasingly global influence of autonomy. I then discuss the links between autonomy and language learning and different versions of autonomy, especially the development of autonomy addressed in the Hong Kong context. Given the differences and limitation of the three dimensions of autonomy, a theoretical definition of autonomy and an ecological approach are proposed respectively. After providing the possibilities of autonomy investigated within a short-term framework, the chapter concludes with a review of the literature in relation to technology and the development of learner autonomy in a technological learning environment, considering the strengths and weaknesses of introducing technology into the language learning classroom, as well as how they might be deemed to support the development of autonomy.

Following the literature review, Chapter 3 provides two interconnecting tools, enabling the capture and evaluation of learner behaviour relative to notions of autonomy in a TLE. This chapter also describes the relevant details of the data collection, data analysis and ethical questions, and discusses the development of the technological platform that mediated the Putonghua programme known as *College Mandarin (CM)*. In addition, interview questions (see Appendix B) throughout three stages of the programme are further elaborated. This chapter also provides a profile and description of the participants and gives an overview of the *CM* lessons.

Chapter 4 is the first of three chapters of findings which provides a baseline evaluation of the students' perceptions and experiences of learning Putonghua with technology before the introduction of the TLE, by addressing the first specific question. It is found that the students attributed value to the support of the guided approach, despite at the constraints imposed upon them by pedagogical convention.

CM introduced new electronic spaces and an alternative dynamic, configuring the dimensions of the learning environment in the classroom as well as online access in the students' free time. I subsequently present the students' personal response to the technology in their *CM* lessons in Chapter 5 by addressing the second specific question. Through identifying the difference between the students' use of Putonghua in the traditional classroom and in their blended lessons, students showed signs of interacting with one another more freely and spontaneously in Putonghua in response to the blended lessons.

By addressing the third specific question, Chapter 6 explores how these students perceived the value of the TLE as a means by which they might become more autonomous learners and examines how closely their perceptions corresponded to the reality of their free-time use of the *CM* platform. In the free-time component, autonomy emerged from the learners' personal response to the RTR forum, an expert-

led discussion forum. The structure of the RTR threads stimulated a pattern of free-time language behaviour.

After examining the main themes that emerged from the literature and capturing the students' response to their use of a TLE, Chapter 7 begins with a review of the principles underpinning the ecological approach in Chapter 3, before describing the students' respective perceptions and reality in the blended classroom and in their free-time strand, from this juncture this chapter discusses the three significant aspects of the students' response: response to direction; response to the environment; and response to direction and the environment. Along this line, a discussion on learner autonomy in relation to the use of technology is further presented to answer the second research question, from which a division of individual and group autonomy is also illustrated.

In Chapter 8, it first provides a summary of answers to two research questions in terms of three specific questions. Then the major contributions of the study are presented and the implications, limitations and recommendations for further research are suggested. The chapter ends with final concluding remarks.

Chapter 2 Literature Review

2.1 Introduction

This chapter is a review of autonomy and technology in relation to language learning. It begins by discussing the rapid development of autonomy around the world. This is followed by the second section, which explains the important relationship between autonomy and language learning. After discussing several studies on autonomy addressed in Hong Kong, three different versions of autonomy are represented across the literature. Through comparing with the differences and limitations between three dimensions of autonomy, a theoretical definition of autonomy is proposed. In light of this, an ecological approach in details is presented. In the following, I justify the possibility of autonomy investigated in a short-term framework. At the end, this chapter reviews relevant literature relating to technology, as well as the development of learner autonomy in a technological learning environment, by considering the strengths and weaknesses of introducing technology into language learning, to further see the relationship between autonomy and technology in language learning.

2.2 The Global Influence of Autonomy

Throughout its evolution, the concept of autonomy has become part of the mainstream of research and practice within the field of education. This concept deserves attention for two major reasons. First, viewed as an educational goal, autonomy implies a particular kind of socialization involving the development of attributes and values that will allow individuals to play more active and participatory roles in a society. Second, the rapidly changing social, economic and educational contexts further promoted the spread of this concept.

First, with the increase of self-access centres and developments in relation to technology-based models of teaching and learning in the 1990s, conventional

language learning in the classroom in many parts of the world has been rejected and deconstructed. In other words, the distinction between ‘classroom’ and out-of-class’ environments begins to become blurred, leading to new understandings of the role of autonomy in teaching and learning. For instance, considering that many adult students might not have enough time or opportunity to attend one classroom-based course, the flexibility of autonomy seems to be more important as it is ‘associated with a radical restructuring of pedagogy that involved the introduction of wholly new ways of working’ (Allwright 1988: 35), which also has become a reality that many teachers have to admit.

Second, the learner-centred educational policy also leads to favouring experiments in autonomy in certain respects. On the one hand, a number of stakeholders in schooling, including principals, teachers, students and parents, could be suggested that they have control over learning from the beginning. However, education reform initiatives around the world have prioritized learner control, even though many teachers have argued that they also have rights in regard to autonomy. On the other hand, as Benson (2006: 33) put it, the globalization of educational policy often involves ‘uncritical transfer of policy from nation to nation, leading to increased homogeneity among national policies’. As a result, the centrality of individuality within globalized educational policy as the source of value and change has come to provide the model for schooling around the world. Such policies create a favourable climate of discourse for experiments in autonomy.

Finally, economic principle as a major driving force also have informed change of educational policy discussed above. As Wiseman and Baker (2005: 85) comment, ‘that the education of individuals can affect national economic growth and has contributed significantly to the economic development of nations’. Along this line, in the context of autonomy across the globe, educational policy of many nations is

always driven by the perception that how to get the best chance of economic development under the influence of forces of globalization, which requires an enhanced level of investment in the education of individuals.

This notion usually views promotion of individual skills as a basic investment of economic capital, such like making more graduates that are preferred by employers in post-industrial societies. In this regard, conceptions of autonomy are encouraged as it has the potential to stimulate the economic development of nations.

In sum, a blurring of the distinction between ‘classroom’ and out-of-class’ environments, learner-centred educational policy and economic-driven principle have converged to create a climate that fosters the development of conceptions of autonomy.

2.3 Autonomy in the Field of Language Learning

Over the last three decades, autonomy has gained importance in the field of language learning. However, we need to understand why autonomy is so important to language learning. Three factors, in terms of identity issues, learner responsibility and the introduction of technology, might be used to explain the phenomenon.

First, van Lier (2004) suggests that there are always closed connections between autonomy and identity when it comes to language learning, with identity development often being addressed through the construct of autonomy. In the face of the seemingly vague relationship between autonomy and identity, Benson and Cook (2013) further touched upon the relations between the two constructs in their examination of the autonomy approach to language learning, indicating that self-direction in language learning involves accepting and adapting to new social roles, as the learners are expected to develop self-regulating social identities in their language learning processes. For example, Yamaguchi (2011) has argued in her study that gaining

personal identity and voice in the target community enabled the student to become a more autonomous learner. In short, language learners' identity may lead to autonomy which will permit the learners to act as confident agents of their own learning.

Second, in theory, learner autonomy could be defined as one kind of freedom and ability to take charge in one's own learning, which entails the implication that learners have to be responsible for managing the consequences of their own decisions and actions as well. Along this line, autonomy and responsibility both require active participation and involvement, due to their interrelated status. In practice, the two concepts are more difficult to be distinguished. For instance, in language learning, teachers could provide necessary means and input for learners, but learning could only happen if learners are willing to participate in. As one old saying indicates, you can bring the horse to water, but you cannot make him drink. In order to make learners actively take part in the learning process, they need to admit that success in learning is not only the responsibility of the teacher. Instead, learners could contribute and share responsibility with the teacher together for the outcome. In other words, success in learning relies on learners with a responsible attitude.

Lastly, the introduction of technology provides more opportunities for the learner to read, speak, write and develop linguistic awareness in authentic contexts that encourage the learner to 'strive for autonomy in the target language' (Kessler 2009: 79). In a similar vein, technology has the potential to liberate the language and the learner from the spatial constraints of the real world. For instance, beyond the classroom, technological social networks have the potential to provide a previously unattainable opportunity for linguistic freedom within a rich communicative environment, in which students could make the most of available resources, even viewing their teachers as an available resource.

This notion is reflected in Benson and Chik's (2010) study in which the presence

of technological online space for uploading and generating content, such as *YouTube, Twitter* and *Flickr,* has the potential to stimulate autonomous language development and language use through online sharing and discussion between participants. Gulbinskiene et al. (2017) showed that the potential effectiveness of Moodle as one of the technological learning environments applied to develop English language skills, foster metacognitive awareness and develop learner autonomy in university settings. The research indicated that students found Moodle platform useful in motivating the improvement of their language learning skills. Additionally, Rosero-Zambrano et al. (2017) considered the impact of adding internet technology on student performance and development of autonomy. Therefore, his research shows that a technology-enhanced course supported by information and communication technologies (ICTs) activities can both contribute directly to student performance and encourage students to develop competencies outside of the classroom, by integrating the traditional classroom instruction with a technological learning environment in an engineering course.

In the study, I argue that if we are to exploit technology so that our learners might realize their capacity for autonomy, simply creating a platform packed with teaching and learning activities and technological functionality is no guarantee of success. In our desire to partner autonomy, technology and language learning, there has been a tendency to overlook the interconnectedness between the internal and external dimensions of autonomy as well as the sense that autonomy is relative to the socio-cultural context within which the individual and the technology exist.

From this perspective, it is not only that the learner should have the capacity to take charge of his learning, but that the learning structure should be constructed to enable the learner to exercise his capacity to take charge of his learning. There are clear implications for the effective integration of technology in language learning in

promoting learner autonomy. We, therefore, not only need to understand how the students conceptualize the value of technology relative to notions of autonomy, but consider how their perceptions correspond to the reality of their online activity. In doing so it becomes possible to gain more profound insights into the nature of the relationship between autonomy and technology in language learning.

2.4 Literature on Autonomy Addressed in Hong Kong

Hong Kong learners are traditionally reported to be inclined to favour rote learning over creative learning, dependent on the syllabus and lacking in intellectual initiative (Biggs 1991; Dearden 1992; Gibbs 1999). As Murphy (1999: 43) has written, 'Hong Kong students display unquestioning acceptance of the knowledge of the teacher…Coupled with this is an emphasis on strictness of discipline and proper behaviour, rather than an expression of opinion, independence, self-mastery, creativity and all-around personal development'.

The issue of how to prepare students to be more autonomous learners, therefore, has gradually received attention in Hong Kong for the last few years. For instance, Chau (2010) considers how eportfolio technology can be used to enrich the students' more traditional pedagogical practices. She reports on how an eportfolio has been integrated into language courses in the English Language Centre of the Hong Kong Polytechnic University with the aim of providing learners with rich autonomous learning opportunities and how the feedback from stakeholders can be used to overcome implementation challenges. In sum, Chau (ibid.) gives great enthusiasm for the new technology per se and always thinks that the introduction of technology could deliver intended benefits for the users.

In my opinion, however, the issue needs to be reconsidered around whether new technologies lead to better learning. In fact, new technologies might not always

deliver users' intended benefits, especially when it is impacted by the other dimensions in a learning environment relative to autonomy. My study thus demonstrates the effects of introducing a technological stimulus into the learners' environment on learner behaviour, by reflecting upon learners' perceptions of the TLE and their use of the technology.

Based on a comparative study that provides insights into the linguistic landscapes (Jarowski & Thurlow 2010) of Berlin and Hong Kong, Chik and Briedbach (2014) investigated the cross-cultural learning potential of virtual spaces. They explore the co-construction of knowledge and the development of learner autonomy among Hong Kong Chinese English language learners and German pre-service language teachers participating in an exchange programme carried out through digital social media. In fact, Chau's (2010) description of eportfolio technology and the investigation of the notion of virtual spaces from Chik and Briedbach's (2014) both indicate that the 'imagined communities' beyond the immediate face-to-face settings are being constructed. These two studies were thus predominantly interested in the issue of communities of practice (Wenger 1998), existing as an extended enterprise outside the classroom.

In addition, at the start of this new millennium, many studies were carried out by individual universities to survey their students' development of autonomy in learning a second language inside the classroom (City University of Hong Kong 2001; Open University of Hong Kong 2002). For instance, Sung (2001) conducted a medium-scale survey with a sample size of 118 first-year Chinese language students from Lingnan University by making them complete a 21-item questionnaire. The results show that the female respondents seemed to have significantly higher autonomy in learning Chinese than their male counterparts.

However, bounded by its quantitative nature, the information the study provides is

not sufficiently in-depth. First, students might have been forced to make choices among the items of answers given and neither had the opportunity to freely express and elaborate upon their views nor to give answers that were not put in the categories of answers. Second, it is still unclear why there was such a gendered differentiation of students' autonomy in learning. Hence, it is necessary to probe into a more fundamental enquiry and to collect rich data by inviting students to freely share their views and perceptions and how they make sense to them.

The only qualitative study reported thus far is that of Benson, Chik and Lim (2012), in which they used retrospective autobiographical accounts to challenge stereotypes of 'dependent' Hong Kong learners. They analysed the sociocultural contexts within which two of the authors learned English, and the ways in which they actively reinterpreted and even physically changed context to achieve learning goals. These goals were developed through ongoing reflections on experience in relation to both individual and cultural factors. The views collected from two authors, although rich, ignore the 'social and cultural situatedness of learner activity' (Kern 2016: 187), with an emphasis on the psyche of the individual, rendering it difficult to understand the impact of broader social contexts on the learners. Apart from this, such a method limits the research scope to individual cases, which possibly hinders researchers from gaining a broader picture of the development of autonomy.

By contrast of this, my study acknowledges that humans are innately autonomous and is not concerned with whether technology can make individuals more autonomous learners. In light of van Lier's (2004) notions of the significance of the relationship between the individual and the environment, a TLE can provide 'affordance' (van Lier 2004: 3) designed to stimulate language activity with which the learner can choose whether or not to engage. The purpose of this study is thus to examine: 1) The nature of the relationship between autonomous behaviour and

technology. 2) The ‘totality of relationships’ (ibid.) between participants, and their response to the TLE. 3) The choices learners make in response to the TLE, and their perceptions of the value they attribute to the TLE experience relative to autonomy, by choosing to engage with the TLE to support language development in class and in their free time.

2.5 Versions of Autonomy

Benson (1997) urges caution in expressly attributing ‘versions’ of autonomy to different writers, as this would suggest that they exclusively represent one approach. Wisniewska (2009) reminds us that they should not be identified as separate entities because of the overlap between different dimensions. I have adopted this as a general organizing principle in my orientation of the literature. I consider and critique three categories: psychological, technical and political versions of autonomy.

2.5.1 Psychological Autonomy

Benson (1997) argues that the psychological version of autonomy is concerned with learner behaviour and attitudes. This perspective corresponds with Little’s (2006: 203) description of learner autonomy as ‘a special instance of a socio-psychological phenomenon’. Furthermore, Little (2009) proposes that the fundamental premise of learner autonomy is that the learner accepts responsibility for his own learning. In other words, it is suggested that responsibility implies that the individual has to deal with the consequences of his actions, altering us to the cognitive and psychological aspects of autonomy, going beyond the matter of autonomy as the management of the process of learning.

However, Wisniewska (2009: 17) points to the view that learner autonomy has a psychological dimension because ‘the cognitive and emotional side of the individual

are engaged in the process of learning' but that simultaneously it also has a social aspect since 'learners do not operate in a social vacuum and their learning is more successful when supported by others'. I thus argue that the cognitive and social dimensions are two sides of the same coin relative to the psychological approach to autonomous learning; and social context and interaction play a vital role in stimulating and shaping the cognitive processes. From an ecological perspective, van Lier (2004: 258) connects 'cognitive processes with social processes', where language and learning are identified as the relationship between learners and their environment.

In this study I am interested in the examination of students' personal responses to a technologically mediated language development programme in terms of their perceptions and their online activity relative to autonomy to see what this might reveal about the nature of the relationship between autonomy and technology. The premise of psychological autonomy is therefore intellectually appealing, considering the view held by Little (2007: 18) that human nature is simultaneously 'internal-cognitive and social-interactive' and that individuals have the capacity to respond to ideas in the target language. However, as an approach it is difficult to operationalize in terms of evaluating the learners' personal responses to the technology.

Conceptually the ecological dimension emerges as a means of evaluating the learners' personal response to the TLE because it acknowledges the inextricable cognitive links between self and others with the unpredictability of a web of social interaction. Although the notion of interconnectedness is appealing, in isolation the difficulties associated with psychological autonomy still remain. The need emerges to step back and examine what the learners are responsive to. In light of this, Littlewood (2009: 76) refines his interpretation of autonomy further, adopting the terms 'proactive' and 'reactive autonomy', which he draws from Flannery's (1994: 56) distinction between group-oriented 'cooperative' and 'collaborative' learning

strategies.

According to Littlewood (ibid.), proactive autonomy means that the direction of the activity is initiated by learners so that learners could take charge of own learning, determine own objectives, select methods and techniques for learning, and evaluate learning. Reactive autonomy means that the learners attempt to regulate the activity once the direction has been set. Direction of the activity, therefore, is initiated by others so that learners could organize learning resources and reach goals. In other words, 'expert' selects learning methods and content for learners to work with. Littlewood (ibid.) indicates that there is a tendency for proactive autonomy to be deemed to hold greater value because with reactive autonomy learners do not initiate the activity, but he (2009: 75) points out that 'once a direction has been initiated learners can organize their resources autonomously in order to reach their goal'. Reactive autonomy thus suggests a view that allows the concept of autonomy to be operationalized and evaluated without the need for radical restructuring of the classroom.

It is possible to manifest signs of autonomous engagement triggered by a stimulus, for example responding to instruction provided by the teacher or computer screen. What emerges is the difficulty in determining how far signs of student engagement are directly a response to the stimulus, or indirectly a response to the stimulus – a response to the network of subsequent interactions. This leads us towards the possibility of considering autonomy from an ecological perspective, with its emphasis on context, broadening our view beyond the learner's 'solitary performance' (van Lier 2004: 259) in response to the task and the technology.

2.5.2 Technical Autonomy

The most commonly cited definition of autonomy is 'the ability to take charge of

one's own learning' (Holec 1981: 3), which includes the capacity to make decisions about the direction, management and organization of learning at different stages. An association between autonomy and the management of the processes of learning is thus referred to by Benson (1997: 23) as 'technical' autonomy. Benson (ibid.) defined technical autonomy as equipping the learners with the necessary skills to manage their learning within and beyond the classroom, suggesting that this corresponded to the notion of 'positivist' approaches to learning.

In the 1970s there has been a tendency for the literature to assume that self-access and self-instruction to be a natural means by which autonomy might be realized (Benson & Voller 1997). Intuitively the suggestion is that self-instruction means working independently of the teacher or the classroom, corresponding to a view of autonomy as freedom from external control, in which the learner has temporal and spatial control. Yet Dickinson (1997: 5) defines self-instruction as 'situations in which a learner, with others or alone, is working without the direct control of a teacher', whether for short periods in class, whole lessons or undertaking a learning programme. However, the difficulty is that assumptions about learning have evolved from a culture of teacher-learner dependency. An autonomous approach to language learning requires a redefinition of teacher-learner relationships.

Benson (2007: 23) argues that while Holec (1981: 3) describes the exercise of autonomy and what the autonomous learner is able to do in terms of learner management, he does not offer any practical suggestions as to how this might be achieved. In suggesting that spontaneous autonomy is a rarity, Dickinson (2009: 45) thus indicates 'learner training emerges as an aspect of technical autonomy to guide the learner towards maximizing the advantages of autonomous learning'. He (ibid.) further suggests that complete autonomy is a rare state but that 'learner training espouses the belief that everybody has the right to develop the capacity for taking

charge of his or her own affairs'. The premise of learner training is to furnish learners with strategies and the confidence to embrace increased responsibility, preparing them for independence, focusing their attention on the processes of learning, with an emphasis on *how* rather than *what* to learn.

Allwright (2008: 35) advocates a 'minimalist approach' to learner training in the classroom, based on the nurturing of naturally occurring instances of autonomy generated as a feature of classroom interaction such that: 1) Each lesson is a personal response to a shared experience. Each student takes something different from the lesson. 2) Classroom discourse makes a difference to the turn of events in the lesson, where linguistic choices influence the lesson. 3) Learners individualize the lesson by responding to one another, as well as the teacher, taking something unique from the experience. Along this line, learner training is considered a way of supporting the individual towards taking control of his own learning.

However, in this study, I am not interested in training students' behaviour. I am interested in the examination of the learners' personal responses to the introduction of a TLE in terms of what they thought and what they did in response to the technology and how far signs of their engagement could be described as an autonomous personal response to the TLE. In so doing, this might reveal something of the nature of the relationship between autonomy and technology in the context of language learning.

2.5.3 Political Autonomy

Mindful of the association between autonomy and freedom from external control, autonomy can be considered a political construct because the learner has the 'right to have control over his learning' (Wisniewska 2009: 17), encouraged in the development of his ability to manage his learning so that he might become the author

of his own world. In fact, this perspective challenges conventions of institutional power structures, leading to the suggestion that constraints imposed upon learners by external forces, such as the institution, have the potential to suppress their capacity for autonomy (Benson 1997). Benson (2000: 114) argues that this might be because 'the interests of society have priority over the interests of the individual'. In the context of the classroom, the direction of learning is traditionally weighted in favour of the voice of authority, with opportunities for autonomous behaviour awarded by degree at the behest of the teacher.

In other words, the classroom emerges as a politicized environment, mediated by the trend towards empowering and recognizing the rights of the individual, in which learners are 'called upon to act as agents of our own socialization and subordination' (Benson 2007: 29). Oxford (2003: 90) thus considers the need to challenge the status quo of the classroom and assumptions about traditional power structures. In his study of young language learners in a school in Northern England, Lamb (2009: 86) suggests that in working towards learner autonomy, teachers need to be prepared to relinquish rather than tighten control, but in so doing this requires the development of structures within which learners feel able to express their views, negotiate and compromise. In his 'expanded notion of political autonomy', Benson (2007: 31) proposes that consideration should be afforded to matters such as 'social context; learning tasks and content; and roles and relationships within and beyond the remit of the classroom'.

A TLE can be described as an externally developed tool with the potential to facilitate collaboration between learners. The difficulty is in the development and construction of TLE-mediated content and the creation of the conditions that balance the voice of the external agent with that of the learner so that the individual feels capable of expressing his right to take control of his learning. Nevertheless, Esch &

Zahner (2004) suggest that the learner is central in the appropriation of technology into a language learning environment, revealing the potential of new technologies by conceptualizing and evaluating the perceived relevance of technological tools to support language development.

I acknowledge the challenges associated with political autonomy and understand the notion of learner autonomy as an ideological Western construct, alien to learners from other cultures, which resonates in the context of language learning around the world. However, the focus of this study is directed towards an examination of the balance of power between external forces and individual autonomy. The emphasis lies in the interrogation of the nature of the relationship between autonomy and technology through an analysis of students' personal response to the technology in terms of TLE-mediated student behavior and student reflections about the TLE. In a word, I am interested in the notion of interconnectedness between the learner and the context.

2.5.4 Summary

Even though the three dimensions of autonomy above are widely cited and critiqued across the literature, creating a useful base from which to precisely conceptualize the notion of autonomy, challenges and difficulties associated with them still exist especially in the process of operationalizing autonomy (see Table 2.1).

Table 2.1 Comparison between three versions of autonomy

Psychological autonomy	**Technical autonomy**	**Political autonomy**
Autonomy as the individual's attitudinal	Autonomy as supporting learners to work	Autonomy as self-determination and

capacity to take responsibility for his learning.	effectively in alternative contexts for learning. Examples: self-access center; computer room; home; blended lessons; etc.	freedom from external control, so that the learner has the right to have control over his learning.
Internal development of the individual towards adopting increased levels of responsibility for his learning.	To equip the learners with the necessary skills to manage their learning.	In the development of his ability to manage his learning, the learner is encouraged to 'become the author of his own world' (Benson 2009: 26).
The challenge and difficulties – capturing the interconnectedness between cognition and language is difficult to achieve. Difficult to corroborate learners' perceptions of their ability to articulate and exchange their own opinions. Difficult to evaluate the impact of the TLE from the learners' personal	**The challenge and difficulties** – simply creating a resource-rich context designed to stimulate signs of autonomous engagement would be no guarantee of success. Difficult to raise awareness of cognitive learning strategies and techniques supporting learners towards fulfilling their potential capacity to	**The challenge and difficulties** – in the development and construction of TLE-mediated content and the creation of the conditions, it is difficult to balance the voice of the authority (i.e. teacher) and the learner so that the individual feels capable of expressing his right to take control of his

response. Challenging to identify the means of reliably capturing the cognitive reflective process.	take charge of their learning in new learning environments.	learning.

For example, Oxford (2003) admits the merits and interrelationship between these different versions of autonomy, but she expressly cautions against an over-reliance on a single viewpoint 'No single perspective should be considered antithetical to any other' (2003: 90). While psychological autonomy incorporates the cognitive implications of being autonomous, Oxford (2003: 85) challenges what it means to achieve 'psychological autonomy' because 'it does not look in depth at the details of any sociocultural context'. She (ibid.) further reflects on the constraints facing many learners in achieving 'political autonomy' with its emphasis on power and ideology rather than individual development mediated through interaction. It inadequately addresses the 'socially interactive nature' (Oxford 2003: 85) of language learning and the relationship between the learner and the interconnecting elements in the environment. It is timely therefore to propose my own theoretical definition of autonomy in a TLE.

2.6 A Theoretical Definition of Autonomy in a TLE: Ecological Autonomy

The underlying conceptual premise of autonomy is that the individual has the opportunity to chart 'his own course through life…according to his own understanding of what is valuable and worth doing' (Wall 2003: 308). And that he is not 'suppressed by institutional choices' (Ciekanski 2007: 112). But we do not exist in

isolation from others, making this an idealistic view. Freedom is relative to the constraints of the sociocultural context in which we live. Autonomy is characterized by the interconnectedness between its internal dimensions and its external dimensions mediated by the multiple stimuli to which we respond. The difficulty lies in balancing the internal and external dimensions of autonomy. In translating this notion into the context of a TLE, students cognitively engage with and respond to the dynamic processes of learning, in response to external stimuli mediated by the teacher, classmates and activities, stimulating social interaction.

Autonomy might be identified as the interconnectedness between internal, external and contextual dimensions. However, my concern is that this represents a linear and therefore reductive perspective of the dynamics of autonomous learning. I, therefore, draw on the metaphor of ecology, identified by van Lier (2004) to reconceptualise language learning and teaching beyond notions of input and output where context and interaction are central to the analysis. Lantolf (2003: 25) argues that the ecological perspective means that 'everything is connected to everything else' where individual elements cannot be considered in isolation but should be considered in relation to other factors. I propose an ecological version of learner autonomy. This dimension acknowledges the more fluid interrelationship between elements that contribute to the unravelling of events in the learning environment and the individual's realization of his potential for autonomy.

I define ecological learner autonomy as: an internal-cognitive response to a socially interactive web of unpredictability. It is a version of autonomy characterized by the significance of the 'totality of relationships of an organism with all other organisms with which it comes into contact' (van Lier 2004: 3). From this perspective, we enrich the notion of interconnectedness between the internal and external dimensions of autonomy by accounting for the transformation of an activity

as it is variously, individually and unpredictably interpreted between participants. Autonomy consequently emerges as a fluid, responsive state, a web of cognitive and socially interactive engagement. According to the ecological view, the dynamics of learning are set in motion, anchored and stimulated by the task and mediated by the teacher and the technology, but cognitively learners make judgements and choices, reflecting and responding in a non-linear way to the voices of those who go before and around them.

Technological functionality makes it possible to probe more deeply, examining complicated patterns of interaction from different environments/contexts. Technology allows us to observe signs of engagement in response to expert-generated tasks (reactive autonomy) and learner-generated activity (proactive autonomy), privileging us with previously inaccessible insights into learner behaviour. Considered alongside learners' reflections about the TLE-mediated experience, we can examine and arrive at more profound insights into the nature of the relationship between autonomy and technology.

2.7 An Ecological Approach

As mentioned above, a theoretical definition of autonomy – an 'ecological' version of learner autonomy (van Lier 2004) – is introduced, in which autonomy might be identified as the interconnectedness between internal, external and contextual dimensions. In this section, I will describe the ecological approach in details, a view that corresponds to the notion of autonomy as represented by our previous theoretical definition. Before doing that, it is important to pay attention to the 'ecology', including its settings and modes of practices, within the lives of language learners (Benson 2009).

Ecology as a theoretical approach for research is described by van Lier (2004: 3)

as a ‘contextualized or situated form of research’ and is concerned with ‘complexity and the interrelatedness of processes that combine to produce an environment’. Like other theorists, Blyth (2009: 175) viewed the ecological approach as an effective means to investigate a TLE, as ‘that technology cannot be examined in isolation from the context within which it exists’. Some researchers (Arnold & Ducate 2006; Gorard & Taylor 2004; Kern 1995; Kern & Warschauer 2000; Kessler 2009; Prasad 2005) have adopted the notion of ecology as a more appropriate label to express the interconnectedness between different factors in a learning environment.

For example, Hamilton (2013) used the ecological approach to investigate a group of advanced English language learners in Mexico. By introducing a virtual element into an EFL context, she (ibid.) attempted to work towards a more profound understanding of the relationship between autonomous learner behaviour and the presence of the teacher and to consider how far indications of autonomous behaviour might be influenced by the virtual space. According to Hamilton (2013: 37), autonomy might be identified as the interdependence between internal-cognitive and external social-cognitive dimensions. A linear and reductive perspective is thus not enough to represent the dynamics of autonomous learning. Instead, the ecological approach is more appropriate to reconceptualise language learning and teaching beyond simple notions of input and output.

Moreover, Kern (2015) discussed how people have adapted the use of new technologies, such like the computer-mediated communication, in different social contexts, and how particular communicative practices have evolved from these adaptations. According to Kern (ibid.), new technologies can act as catalysts in the creation of new social configurations, as when members of a special interest group living in different locales develop an online community. In other words, new technologies reshape and extend existing social groups, where an existing face-to-face

social network is transformed and extended online. In order to examine such an interconnected nature of the transformative network, an ecological approach is used by Kern (ibid.) as this dimension acknowledges that everything is connected to everything else where individual elements cannot be considered in isolation but should be considered in relation to other factors.

Through arguing that *interest* is the essence of self-sustaining learning, Barron (2006) attempted to develop an ecological framework that illustrates how learning is stimulated and sustained across different settings and resources. It highlights interest as an important element to stimulate learners' self-directed learning outside the classroom, and focuses on describing the origin of interest in learning. As Barron (2006: 195) has pointed out, she defined learning ecology 'as the set of physical or virtual contexts that provide opportunities for learning, with each context compromising a unique configuration of activities, material resources, relationships and the interactions that emerge from them'. Within her framework three assumptions are presented: 1) Learners' interest in learning is stimulated and sustained by a variety of resources that are available in a learning ecology, such like online peer interactions, assignments and forum posts. 2) Once their interest is stimulated, learners would employ different strategies to create various learning opportunities. 3) These interest-centred learning activities are 'boundary crossing' (Lai 2017: 32), which means that interests originated in one context could be followed up in many other contexts. To sum up, Barron's (2006) learning ecology framework admits the crucial roles individuals play in the process of sustaining their own identity, shedding light on how learners combine different technological and non-technological resources together to create their own learning spaces and sustain self-directed learning.

Distinguished from Barron's (2006) interest-driven focus of learning ecology, Luckin's (2010) ecology of resources model discusses how to select and use a series

of resources available in their environments in an effective way, so as to construct a personalized learning experience that meets their learning needs. According to Luckin (cited in Lai 2017: 33), an ecology of resources is ‘a set of inter-related resource elements, including people ad objects, the interactions between which provide a particular context’. Within the ecology of resources framework Luckin (ibid.) indicates a key construct, namely the *zone of collaboration*, which consists of the *zone of available assistance* (ZAA) and the *zone of proximal adjustment* (ZPA). The ZAA refers to the resources that are available to be approached by the learners; while the ZPA mentions the resources that are actually occupied by the learners. According to this model, learners are surrounded by various resources that could potentially provide assistance to their learning. However, it is difficult to make a change of potential benefits into actual ones and thus three different strategies needs to be implemented: 1) choosing the correct forms of assistances that could act as resources for learning; 2) being aware of the relationships within and between the resources and ensuring their development to fit for the learners’ needs; 3) making appropriate adjustments to support learning and enabling the transformation of ZAA into ZPA. After reviewing a few case studies and theoretical frameworks of ecologies, an ecological approach in details is discussed in the following section.

2.7.1 Merits of an Ecological Approach

According to the ecological perspective, learning is a process of collaboration in which notions of autonomy do not mean individualism but rather ‘having authorship of one’s actions’ and ‘having the voice that speaks one’s words’ (van Lier 2004: 8). The notion of ecology lends itself well to the examination of the impact on the behaviour of learners working together following the introduction of a TLE. It is suggested by Blyth (2009: 175) that technology has generated a multiplicity of

metaphors such like ‘the conduit, the tutor, the tools, the community’ by way of conceptualizing its role as a culturally constructed artefact in language learning. Nevertheless, the difficulty in adopting these labels is that technology is examined in isolation from the context within which it exists.

Given the increased presence of computers, the effects of technology on human activity should be considered in light of ‘the totality of relationships’ (van Lier 2004: 3) between constituent elements of the environment, for instance, the language; the learning; the classroom; the participants. On that basis, the notion of ecology has been adopted as a more appropriate label to express the interconnectedness between factors affecting learners’ engagement with technology and learning has ‘become part of the ecology of human activity’ (Warschauer 2009: 12) in an era when social practices mediated by the internet. The ecological approach consequently contextualizes language as a social activity.

Relative to the notion of autonomy, how might learners therefore be encouraged to use the target language to express themselves more freely? Benson (2009: 26) suggests that given the right conditions, the individual’s innate capacity for autonomy might flourish. The difficulty lies in understanding the nature of the relationship between autonomy and the use of a TLE and in knowing how ‘to understand these opportunities and integrate them where they are pedagogically relevant’ (Dillenbourg et al. 2012: 12). Three characteristics of the ecological approach emerge (van Lier 2004: 4-8) to form the cornerstones in facilitating our understanding: affordance, the totality of relationships and language defined by context versus language defining the context.

2.7.2 Affordance – Opportunities for Language Development

The first cornerstone is the notion of an *affordance*. From the ecological perspective,

an affordance relates to the view that context provides learners with opportunities for learning and language development mediated by content and materials, described by van Lier (2004: 81) as the 'semiotic budget', but it significantly includes the possibility that learners respond to some affordances but not others. The notion of affordance thus embraces the sense of choice and agency integral to the concept of autonomy. The examination of learners' interaction with the technology reveals with which elements of the TLE the students choose to engage and those they ignore, providing indicators of the characteristics necessary to stimulate autonomous behavior and revealing something of the nature of the relationship between autonomy and the technology.

Furthermore, an affordance need not simply refer to the students' responses to content, but also to the contributions made by individuals to one another's responses to that content. One student's contribution might be perceived, interpreted and picked up by a different student, yet ignored by another. From the ecological perspective, language learning becomes a less static 'process of receiving and processing pieces of …fixed code' (van Lier 2004: 90). The notion of the affordance looks beyond the provision of content and includes the multidimensional character of students' interaction with one another as they engage with the content. The notion of the affordance acknowledges the value of learning opportunities that arise from the exploitation of the unexpected, satisfying the unpredictable quality of the spontaneous use of language that might be mediated by the TLE. It becomes possible to examine students' activities to determine whether students feel capable of organizing their thinking in order to contribute an 'internal-cognitive' (Little 2007: 18) response to the unpredictable web of social interaction in a technologically mediated environment.

It is suggested that 'technology itself does not determine learning outcomes' (Piccoli et al. 2001: 408), but rather the endeavours of the people who populate the

technological environment and generate their own learning opportunities. If this is the case, then signs of autonomous behaviour need not necessarily be a response to the technology per se, but to the reaction created by individuals engaging with one another in the context of a technologically mediated environment. This leads to the second ecological cornerstone of the framework, the notion of the 'totality of relationships' (van Lier 2004: 3).

2.7.3 Totality of Relationships

Language is defined as the connecting element not only between people, but also the world. In turn, language learning emerges as a means by which the individual can engage more successfully with his environment (van Lier 2004). The notion of *totality* embraces the multiple ways in which individuals might engage with one another in response to their environment, considering the view that 'the ecological perspective…states that we perceive the world always as interactive, reciprocal participants' (van Lier 2004: 170). In this way, the whole ecology was defined the 'totality of relationships of an organism with all other organisms with which it comes into contact' (ibid.).

In the study, I am interested in scrutinizing 'the totality of relationships' (ibid.) and the dynamic between learners as they respond to the content and one another following the introduction of a technological element to their learning context. I am also interested in expanding Little's (2000) notion of interconnectedness to explore the possibility of a further dimension of the construct, ecological learner autonomy, in which learners proactively or reactively respond to the web of interaction, and the voices of those that surround them anchored within the context of a TLE. In this way it becomes possible to look beyond the identification of instances of autonomous behaviour so that one might examine the possibility that introducing the TLE alters

the contextual dynamic, enhancing the learning experience and relationship between individuals in terms of autonomous behaviour. Proponents of the ecological approach identify language as the connecting element between individuals and the context within which they exist; language is thus the third cornerstone of the framework.

2.7.4 Language Defined by the Context vs. Language Defining the Context

The ecological approach regards the context as defining the language, but simultaneously sees language as defining the context within which it exists, which suggests two outcomes. On the one hand, language choices made by learners might be determined by the context (i.e. the structure and direction of *CM* blended lessons and free-time strand), raising questions of learner agency. For instance, where students are given an expert-generated forum thread, students might be said to be responding to the direction indicated by the thread, challenging notions of meaningful choice. On the other hand, students might be responding to the direction initiated by the forum task, but they could also create and define the character of the technological context through their individual contributions to the forum, influencing their classmates' thinking and reflected in the development of ideas along the thread.

They, therefore, could be said to have had a hand in shaping their environment. The expression of their own ideas and their choice of language defines the character of the forum postings, revealing something of themselves and setting the tone of the environment for the wider audience. As learners make online judgements based on the views of those who have gone before them, a network of unplanned and interconnected communication emerges. It is suggested by van Lier (2004: 41) that the analysis of contextual interaction should go beyond the actions that take place, as in class 'things are not always visible and audible in the interaction' but may determine the course of events. This is particularly true online where 'students may

leave a trace of their presence…Viewing which area has been visited by other students is an indirect mode of interaction' (Dillenbourg et al. 2002: 5).

2.8 Investigation of Autonomy within a Short-Term Framework

As mentioned earlier, the development of autonomy has been investigated through a variety of research methods. These methods for data collection are typically carried out within a short- or long-term framework due to the availability of the study.

In examining the self-regulation and autonomy of Japanese learners of English, for example, Yashima (2014) employed a quantitative method to obtain different data, by investigating two cohorts of high school students attending an English programme from 2007 to 2010. Questionnaires written in Japanese were administered to the participants four times over two and a half years. On the other hand, some researchers (Benson, Chik & Lim 2003; Chik & Briedbach 2014; Gao 2003; Toohey & Norton 2003) prefer using qualitative methods to collect participants' 'real' learning experiences. For example, through a case study targeting two young British-Bangladeshis in London—Nitu and Saima—Chowdhury (2016) traced and documented their personal stories of learning English as a second language (ESL) over around six years divided into three major phases: formal school, informal/self-instructional and natural learning environments.

However, not all research on autonomy is placed in a long-term framework. In exploring the autonomy of Mexican English-as-a-foreign-language (EFL) learners aged 23–70, Andrew (2016) selected seven Mexican adult EFL learners for the study. The principal source of data consisted of five in-depth interviews for each participant, which took place over one four-month EFL course of the school term. From the beginning of the course, the interviews were conducted via weekly audio-taped narrative accounts of the participants made in Spanish. This four-month investigation

undoubtedly indicates that it is possible to examine the development of autonomy within a short-term framework. In this respect, Nelson (2016) presents us another one example. To investigate which factors could make EFL learners become more autonomous, the author observed English language classes at one college in an American city over a six-week period and interviewed the three participating teachers as well as 28 students. My study attempts to gain insights into the nature of the relationship between autonomy and technology by exploring the students' personal response to a 13-week TLE-mediated Putonghua programme.

2.9 The Development of Technology in Language Learning

Technology can be interpreted in a variety of ways, but the notion of technology in this study refers to 'digital technology' described by Kern (2006: 184), which primarily means computers or computer-assisted language learning (CALL) instead of other forms of digitized media. As mentioned earlier, the technology described in this study is a technological learning environment (TLE), summarized and illustrated by Dillenbourg et al. (2004: 3): 1) This environment is a designed information space. 2) Educational interactions could occur in the environment. 3) Students could co-construct the virtual space with their teachers together. 4) Students are also capable to enrich activities in the space through diversified technologies and multiple pedagogical approaches.

The literature (Kern 2006; Lantolf 2003) indicates that the realization of the transition from a dependent learner to an autonomous user of the target language is held in tension by complex notions of what it means to be autonomous. The matter is further complicated by overlaying notions of autonomy within the multiplicity of the TLE with which our students engage. Although the relationship between autonomy and technology in language learning might be complex, there is an intuitive

connection between autonomous learning and the opportunity for the authentic use of the target language with technology.

With regard to language learning, it is suggested that technology extends opportunities for the learner to read, write and develop learning awareness (Fisher et al. 2004), providing linguistic opportunities in authentic contexts that encourage the learner to 'strive for autonomy in the target language' (Kessler 2009: 79). As information computer technology (ICT) tools that are more familiar in other sociocultural contexts find their way into the classroom, the challenge of poly-contextualized teaching and learning become clear (Leander 2002; Lund 2006). For the students who appear in this study, technology might have the potential to liberate the language and the learner from the spatial constraints of the classroom. Beyond the classroom, technological social networks are well-populated and have grown rapidly, suggesting that electronic space has the potential to provide a previously unattainable opportunity for linguistic freedom within a rich communicative environment. For example, Lee (2011: 88) found that blog-mediated asynchronous communication increased students' levels of participation, 'they are intended not only for a sole instructor but rather for a broad audience'. It seems, therefore, that the literature advocates the potential of technology in intensifying the learner's level of engagement with the target language.

Despite these compelling suggestions about the value of integrating technology into the language learning classroom, some (Hawisher & Selfe 1991: 56) still argue that 'we have to take a critical perspective and remain sensitive to the …use of computers'. Smith (2003: 39) cautions against being seduced by the increasing presence of computers in the language classroom, because 'huge technological developments…have not always delivered their intended benefits to end-users'. In seeking to unravel the paradox of the use of technology to support language learning

and autonomy, it is best to begin by considering the evolution of technology in the classroom. Early technological development reflected an online pedagogy in which 'the computer substitutes for the teacher and textbook as conveyor of information' (Stephenson 2001: 3), representing characteristics of the 'traditional guided instruction' (Crook 1994: 79) of the classroom. It is thus suggested that by adopting this approach, the early potential for learning with technology has been lost.

As technology has become more sophisticated, there has been a shift away from the early behaviourist model of CALL (Warschauer & Healey 1998) with the 'computer-as-tutor' (Crook 1994: 80) towards 'interaction with others through and around the computer' (Fisher et al. 2004: 50), with an increased interest in 'how learners approach specific communicative situations rather than how well they have acquired linguistic structures' (Kern 2000: 188). It is suggested that questions asking whether CALL works or whether technology is good for, and leads to, better language learning, confuses tools with methods and outcomes. In other words, the evaluation of technologies in language learning has taken a 'simplistic view of the value and role of technology' (Ganem Gutierrez 2006: 233).

Ganem Gutierrez (ibid.) goes on to suggest that 'one cannot attribute the success…of a task solely to the medium of implementation', and that factors beyond the technology have a role to play. Kern and Warschauer (2000) consider that attention should be redirected towards the practices and contexts within which the technology is used, supporting the suggestion that 'One cannot separate the tool from how it's used or embedded in social interactions' (Blake 2008: 132). To reflect this view and in an attempt to provide a rich learning environment, the design of *CM*, a TLE used by the students in the study, acknowledged the more fluid interrelationship between elements in the learning environment.

The interactivity of technologically-mediated communication creates a

collaborative element to the exchange of ideas and text construction between students. Some theorists (Blyth 2009) thus have looked towards the ecological approach in an attempt to better understand the interconnectedness and 'totality of relationships' (van Lier 2004: 3) between participants in digital learning, reflecting learning as a 'non-linear, relational human activity, co-constructed between humans and their environment' (Kramsch 2002: 5).

For instance, Kessler's (2009) studies indicate that an online environment can provide a stimulus mediated by the technology encouraging peer collaboration. In Kol and Schcolnik's (2008: 52) study, students' reflections and attitudes were examined in the light of their use of asynchronous forums that had been incorporated into an advanced course for English for Academic Purposes (EAP). It was hoped that the forums would provide a platform for 'thoughtful communication' (ibid.) so that students could write freely and fluently unhindered by the presence of a teacher. Without teacher-led direction the students did not necessarily respond as anticipated to the stimuli mediated by the forum but rather 'they used the forums to react to the ideas, the new information, and the authors' arguments. The texts constituted the stimuli and provided the content, vocabulary, issues and ideas for discussion' (ibid.).

The literature indicates that the increasing presence of technology offers learners previously inaccessible opportunities to engage intellectually with the language and liberates the learner from the constraints of the classroom. However, Mason (2001: 69) suggests that 'simply providing an environment in which students and teachers could interact did not guarantee successful engagement in the target language…we could see the potential but needed a much more effective approach for facilitating equality of participation'. While explicit participation in the form of text-based or oral interaction is generally acknowledged as the life force of online environments, inactivity through non-contribution still exists. Non-contribution is also a personal

response to environmental stimuli and may be a matter of choice. In the study, I refer to silent online presence as implicit participation whereby the learner engages by reading or listening, but nevertheless makes a different choice in response to the environmental stimuli.

2.10 Learner Autonomy in the Technological Learning Environment

As mentioned above, we have discussed learner autonomy and development of technology in language learning respectively, it is time to synthesize the relationship between learner autonomy and technological development. In fact, a large amount of new interests have been focused on exploring both of them together for two reasons: on the one hand, since from the new millennium, the integration of computers into everyday life was being a reality. People began to use computers and digital devices for more personal purposes, such like media sharing by using digital tools, instead of traditional out-of-class language learning events. On the other hand, the relationship between technology and users was changed from teacher-oriented to learner-oriented.

At the very beginning, computer use in language learning was scarce in and out of the classroom. Computer-Assisted Language Learning (CALL) was thus considered to be helpful for promoting learner autonomy, as such a ‘technology can direct learner attention to metacognitive strategies such as planning, directing attention, self-monitoring, self-evaluation as well as the sorts of strategies which are required for effective exploitation of the facility itself (i.e. selection of materials, control of time)’ (Barnett, cited in Chik 2018: 76). In line with that, computers were placed at the center of the CALL process for the language learning purpose, effectively leading to the control of integrating technology as teacher-oriented instead of learner-oriented. With the normalization of computer use in and beyond the classroom, many language learners are making their new digital practices. According

to Chik (2018), these practices may include using digital games and photos, namely everyday digital practices. As a result, many researchers adjust their focus and make stronger connection between language learning and learners' 'social worlds' (Chik 2018: 75). Learners' engagement with their new digital practices is viewed one major aspect of the social worlds.

In order to gain better knowledge of how engagement in digital practices contributes to learner autonomy, Chik (2018) used the experiences obtained from using an online language learning social network website, Duolingo, and participating in relevant communities, to examine the relationship between digital practices and learner autonomy development. Through using a five-dimension theoretical model of out-of-class learning (location, formality, pedagogy, locus of control, and trajectory) (Benson, 2011; Benson & Chik, 2011; Chik, 2014a), the author's learning experience on Duolingo associated with the digital practices was analyzed based on a series of auto/ethnographic data. Consequently, Chik (2018) found that this model provides a systematic way to examine the relationship between digital practices and learner autonomy development.

With digital practices become conducive to language learning, the research trend on learner autonomy starts to take new shifts in the digital era. One of changes is that many researchers focus specially on affordances for and constraints on learner autonomy through digital practices that learners undertake in out-of-class contexts. In her another study, for example, Chik (2014) attempts to compare the relationship between digital game play and second language (L2) learning in East Asia, through which she (ibid.) describes some young people are playing the English- or Japanese-language versions of the most popular commercial off-the-shelf (COTS) video games. Drawing also on the five-dimension theoretical framework mentioned earlier, and rich data from gaming sessions, stimulated recall, focus group discussion, individual

interviews and online discussion forums, Chik (2014) argues that gamers exercise autonomy, to some extent, by managing their gameplay both as leisure and learning practices. More importantly, gameplay-as-learning practices are supported by wider communities of digital gamers who take on roles as language teachers and advisers.

It is evident that Chik's (2014, 2018) two studies attempt to examine if and how a learner's involvement in digital practices may shed light on the development of learner autonomy in out-of-class contexts. As Chik (2018: 88) has admitted, 'It is true that as more learners are engaging in digital practices for personal and leisure purposes, many of these activities are being turned into intentional learning events'. Therefore, it is absolutely valuable to examine how digital practices might link to learner autonomy. In my study, however, the focus can be the exploration of the relationship between autonomy and technology by adopting an ecological approach, even though affordance is also viewed an essential concept of the ecological perspective on learner autonomy. It is hoped to gain a better understanding of the nature of the relationship between autonomy and technology based on the students' response. In other words, in accordance with the students' personal response towards the direction, the environment, the direction and environment together, affordances and totality of relationships in a learning environment are analyzed, with the introduction of technology.

2.11 Conclusion

In this chapter, I have reviewed the literature in relation to the development of autonomy and technology in the field of language learning. Given the complexity and multiplicity of interpretations of the concept of autonomy, the difficulty lies in operationalizing the idea of autonomy, making the transition from the ideal to meaningful application in a learning environment. In attempting to operationalize it in

the context of language learning mediated by technology, it is helpful to provide an overview of the methodology. In the next chapter, two interconnecting tools will be introduced to capture and evaluate the instances of autonomy in action, mediating insights into the learners' personal response and interaction with the technology, creating a platform from which to work towards a better understanding about the nature of the relationship between autonomy and a TLE.

Chapter 3 Methodology

3.1 Introduction

The chapter concerns the methodology of the study. First, it describes the development of two interconnecting tools that facilitate the capture and evaluation of instances of autonomy in action, mediating insights into the learners' personal response and interaction with the technology, creating a platform from which to work towards a better understanding about the nature of the relationship between autonomy and technology in language learning. Then an outline of research methods in terms of the research context, sampling, data collection and analysis adopted for the study are discussed in detail. Finally, the research credibility, validity and reliability, limitations and ethical issues are scrutinized.

3.2 Research Design

Autonomy is one of the most nebulous concepts to define, to recognize and to record, so that capturing and evaluating instances of autonomy might be considered to be difficult. Although a theoretical definition of autonomy is proposed in Chapter 2, it reveals nothing about the nature of learners' personal response to the TLE, from their classroom engagement with the technology, to their free-time decisions to follow links or read and respond to forum postings. A more targeted tool is therefore required to capture and categorize learner activity.

3.2.1 Capturing Autonomous Learner Behaviour in a TLE: The Development of a TLE Autonomy Framework

In attempting to capture and categorize instances of autonomy in the context of language learning mediated by a TLE, it is helpful to provide an overview of the framework for autonomy proposed by Macaro (2007). Macaro (ibid.) suggests that the

development of autonomy is most effective in an interpersonal environment. Table 3.1 summarizes Macaro's (2007: 170) framework for functional learner autonomy in the language classroom.

Table 3.1 Autonomy framework adapted from Macaro (2007: 170)

Autonomy of language competence	**Autonomy of language learning competence**	**Autonomy of choice and action**
● Communication in the target language with a reasonable confidence without the help of a more competent speaker.	● The internal and external systematic application of strategies, describing the learner's awareness of, and conscious ability to deploy, a range of complementary strategies to complete a task using the target language. ● The potential of the individual and the environment in facilitating the application of	● The capacity for the individual to be free to make informed choices in the planning and strategizing of their achievement of language learning objectives.

	cognitive and metacognitive learning strategies.	

3.2.1.1 Autonomy of Language Competence

Macaro (2007) addresses autonomy relative to language use rather than general learning strategies. In becoming more linguistically competent, he acknowledges two complications. First, literature suggests that learners continue to use formulaic phrases in their transition towards the generation of independent utterances in the target language, so that 'the fluent language speaker is probably making subconscious selections regarding formulas and utterance generation' (Macaro 2007: 80). A second complication is that in the quest for grammatical accuracy, the teacher may overlook the significance of interlanguage in the learner's appropriation of the target language, dampening creativity. Macaro is therefore concerned with how the individual engages with the language on a personal level. This category of autonomy resembles Littlewood's (2009: 50) view of 'autonomy as a communicator' and 'the journey towards the expression of personal meanings'. Although Macaro makes explicit reference to the development of communication in the target language, he makes no distinction between the developmental value of proactive and reactive utterances.

3.2.1.2 Autonomy of Language Learning Competence

This category of autonomy illustrates the transference of language learning skills to other situations and the balance between external constraints and the individual's desire for language learning manifested in his 'cognitive and metacognitive strategic behaviour' (Macaro 2007:55). Instead of linguistic competency, this version is more

relative to individual learner autonomy, describing how the student adapts to his learning environment, developing strategies to maximize learning opportunities, making conscious choices about what, when and how to learn. Macaro (2007: 171) adds that this also includes developing 'the ability to cope with access to target language sources…not planned or mediated by the teacher'. These notions can be applied to the students' cognitive and metacognitive strategic behaviour in response to the TLE. There seems to be an assumption that the transition from a culture of learner dependency to independence in and out of class is unproblematic.

3.2.1.3 Autonomy of Choice and Action

Macaro (2007: 171) proposes that learners need opportunities in class to develop their ability to make independent choices. One difficulty with the notion of autonomy of choice and action lies with the view that learners require 'time and psychological space' (Little 2007: 8) in which to learn. In other words, the individual might be capable of making choices related to his linguistic development and language use, but the context of the traditional learning environment are usually beyond the learner's control. Mindful of the notion of interconnectedness, I would argue that the notion of autonomy of choice and action is characterized by the interplay between contributing environmental stimuli. Macaro (2007: 60) sees that ultimately it is freedom of choice that underpins language learner autonomy 'from the smallest classroom task to a lifelong attitude and motivation for learning', arguing that 'autonomy resides in being able to say what you want rather than producing the language of others'. Macaro's framework does not overlook the cognitive challenges associated with internalizing and learning a language with the external difficulties in strategizing the journey towards linguistic competence in a socially mediated context. Learning environments might be rich in affordances but tensions emerge from external factors with the

potential to overwhelm the individual's cognitive capacity to express his potential to make independent choices.

3.2.1.4 Framework for Autonomy in a TLE

As I suggested earlier, the purpose of the study is to gain insights into the notion of autonomy in a TLE from an evaluation of learners' personal response to a technologically-mediated Putonghua programme. The framework for autonomy in a TLE as a methodological tool is designed to examine the construct in practice. Attributes of Macaro's framework for autonomy have served to inform the development of the framework for autonomy for the more specific context of a TLE. The framework is divided into two sections: the blended classroom and free-time access to reflect the technologically-mediated learning programme described in this study (Table 3.2).

Table 3.2 TLE autonomy framework – blended classroom learning and free time

Type of autonomy	**Definition**	**Context**
● Proactive autonomy ● Reactive autonomy	● Responsibility ● Decision-making ● Evaluation	**Blended classroom learning:** ● Blended learning with computers in the classroom ● Teacher as facilitator and moderator ● Self-regulated activity ● Collaborating with

		peers ● Striving towards common goals
● Proactive autonomy ● Reactive autonomy	● Reactively responding to expert-generated RTR threads ● Reactively responding to student-generated RTR threads ● Proactively generating own threads in the weekly RTR forum	**Free time:** ● Writing forum posts ● Reading forum posts ● Writing assignments ● Discussion with classmates ● Reading additional resources

The notion of autonomy is characterized by students' 'internal-cognitive' (Little 2007: 14) capacity to engage proactively or reactively with the TLE in the blended classroom or in their free-time, incorporating the sense in which learning is a 'social-interactive' (Oxford 2003: 85) experience between the individual and the environment. For instance, in blended lessons, learners cognitively engage with the class, follow the tasks determined by the structure of the lesson, and in so doing formulate their own observations, decisions, reflections and evaluations, manifesting signs of 'reactive autonomy' (Littlewood 2009: 75). Alternatively, learners might go off-task, charting their own path, exploring alternative avenues and resources, suggestive of 'proactive autonomy' (ibid.). Free-time use of the TLE could involve the students 'proactively' choosing and strategizing their exploration of TLE-mediated opportunities for language development through reading and populating the student-

led forums. On the other hand, learners might ‘reactively’ read and reflect, thereby implicitly engaging with the structure determined by expert-generated posts and tasks.

The framework sets out a clearly defined set of criteria to indicate the types of autonomous student behaviour one might expect to observe in the context of a TLE, whether in the blended classroom or in the students’ free-time use of the platform. The framework is also designed to be used as a reference tool, supported by the theoretical definition of autonomy in Chapter 2, with which to capture, interrogate and categorize instances of autonomous learner and language behaviour in response to the technology in the form of descriptors in Chapter 5 and 6 respectively.

3.2.2. Evaluating Autonomous Learner Behaviour in a TLE: The Development of a Conceptual Framework

The TLE autonomy framework serves as one essential tool in the capture and categorization of evidence of TLE-mediated student activity. However, in isolation, we have no means of knowing whether indications of autonomous learner behaviour are a response to the technology per se, or whether the students would have produced the same response to the paper-based materials (i.e. a course book). The second tool is thus conceptual, required to evaluate evidence from a theoretical perspective, and used as an instrument with which to build a better understanding about the nature of the relationship between autonomy and technology.

Introducing a TLE to the students’ learning environment creates a new virtual dynamic, altering the dimensions of their learning experience. Evaluation of autonomy in response to the introduction of the TLE should therefore be considered in light of the context within which the learning takes place. It is of interest to examine the interconnected dynamic of events within a learning environment. The underlying principle of the conceptual framework has been drawn from van Lier’s

(2004) ecological approach (see section 2.7).

In Chapter 2, the ecological approach is discussed to examine the impact on the behaviour of learners working together following the introduction of a TLE. However, we found that there has been relatively little discussion between theories of knowledge and learning and versions of autonomy. By drawing out correspondences between versions of autonomy and approaches to issues of knowledge and learning in the next section, we may be able to arrive at a better understanding of the ways in which learner autonomy for language learning has developed.

3.2.2.1 Theories of Knowledge and Approaches to Learning

The concept of autonomy has been examined across the literature in Chapter 2, but Wisniewska (2009) suggests that differences in approaches between the theorists' scrutiny depends on the aspects of autonomy they prioritize. Benson (1997: 19) locates his 'versions' of autonomy within the domains of theories of knowledge and learning, drawing on theories of *positivism* and *constructivism*, suggesting that this serves as a useful position from which to gain useful insights and explore the relationship between autonomy and language learning.

Positivism, which might be still popular in our current educational system, is based on the assumption that knowledge is one kind of objective reality, and the teacher could possess and transfer this objective reality to their students. Therefore, the major function of an educational system is 'the transmission of a received body of facts, values and procedures for conceptualizing and adding to that body of knowledge' (Nunan 1999: 4). To some extent, positivism makes that an educational system just looks like a conveyor belt, in which the students are the items on the belt being conveyed without their own will, waiting to be worked on by the person in charge (it is usually the teacher). In fact, it is also the way most of us still maintain

and enhance in the traditional classrooms. As a result, according to Benson (1997: 20), learning is the 'transmission of knowledge from one individual (the teacher) to another (the student)'. In addition, Benson and Voller (2007: 143) further indicates that the theory of knowledge and learning is essentially underpinned by positivist principles because the 'knowledge to be acquired is pre-determined but with-held from the learners'.

In contrast, from the constructivist perspective, the function of an educational system is to create the condition whereby learners are not just like empty vessels waiting to be filled; instead, they are the ones who make things happen. In other words, learners could actively generate and form their own skills and knowledge. For achieving such a aim, experiencing and discovering could be considered two guiding principles of constructivism: experiences play a very crucial role in shaping our own understanding of the world on the one; and discovery means a process of search for meaning and the ultimate goal of learning is thus meaning construction on the other. Taking this into account, learning is, according to constructivism, mediated and engaged with which the individual acquires and makes sense of new information, reflecting upon it in the light of existing knowledge where 'language does not reflect reality…it constitutes the means by which subjective realities are constructed' (Benson 1997: 21).

In exploring relationships between theories of knowledge and learning and versions of autonomy, we thus need to be aware that the divisions between positivism and constructivism are not as clear cut as it indicated previously. In fact, purely constructivist approaches are difficult to be found, as all theories of knowledge must engage at some levels with empirical facts. Similarly, pure positivism is also rare, as learners usually have strong willingness to become the authors of the world and responsibilities to construct their own understanding of the world. In practice, the

optimal way to look at the theories of learning and knowledge perhaps is by placing the two dominant approaches on a continuum with positivism on the one end, constructivism on the other. Along this line, we could say that learner autonomy might fall somewhere in-between. This requires an eclectic view of laminating the positivist and constructivist approaches to learning, which is applied in the formulation of learning methodologies. To some extent, an eclectic blend of the two theoretical perspectives might be an effective approach, enabling the learner to exploit his innate potential for autonomy, and highly associating with two conditions proposed by Holec (1981) in section 1.1.

For example, in Murray's (2009) study it is suggested that while students liked being able to work at their own pace, they also felt comfortable with the coercive nature of the classroom, because it absolved them from the burden of responsibility for their own learning. This proves Holec's (1981) view that although being autonomous means taking charge of and making decisions about learning, autonomy is fundamentally the individual's potential capacity to act in a given situation, which supports Murray's (ibid.) view that autonomy is 'a highly individual construct', meaning that student might be 'autonomous in one area while dependent in another'.

On the other hand, Holec (ibid.) goes on to suggest that there must be a learning structure in which control over the learning can be exercised by the learner. The challenge for the institution lies in providing a structure within which the student can exercise their capacity for autonomy, but this leaves educators with the problem of treading 'a fine line between propagandizing on the one hand and abandonment of responsibility on the other' (Benson 2007: 34), raising questions about 'where on the continuum between fully directed tasks and complete learner autonomy does good learning lie' (Fisher et al. 2004: 57).

More importantly, as mentioned in section 2.6, a theoretical definition of

autonomy – an 'ecological' version of learner autonomy (van Lier 2004) – is introduced, in which autonomy might be identified as the interconnectedness between internal, external and contextual dimensions. From this perspective we also enrich the notion of interconnectedness between the internal and external dimensions of autonomy by accounting for an eclectic view of the two approaches to issues of knowledge and learning.

3.2.2.2 Framework for Autonomous Learning Behaviour in a TLE

From an ecological perspective, context and language are essential elements in the evaluation of the nature of the relationship between autonomous language and learner behaviour in response to students' use of a TLE. Having understood the three cornerstones of the ecological approach in section 2.7, one can then apply the principles of the ecological approach more effectively, making it an essential tool in working towards the construction of a better understanding about the nature of the relationship between autonomy and technology in the context of language learning. The framework illustrated in Figure 3.1 is a visual representation of the notion of autonomous learning behaviour in a TLE from an ecological perspective.

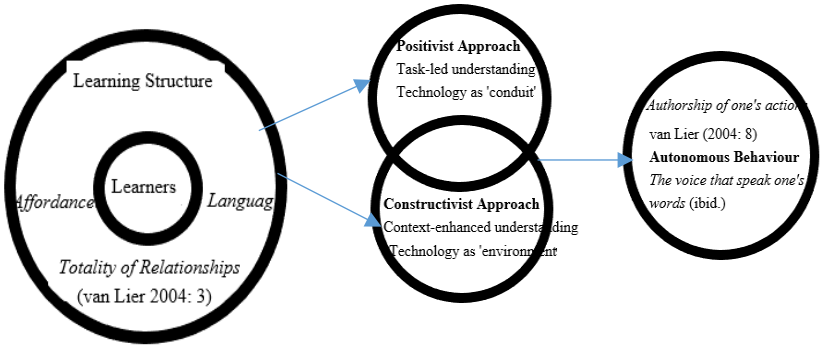

Figure 3.1 Framework for autonomous learning behaviour in a TLE

The large circle on the left-hand side represents the learning structure or context, described in ecological terms as ‘activity spaces’ (van Lier 2004: 63) to capture the multiple forms the context might take. The activity spaces might be the classroom and the TLE. Within these spaces:

1. Affordances avail themselves to the learner, signalling ‘an opportunity for or inhibition of action’ (van Lier 2004: 4).
2. The concept of the ‘totality of relationships’ (ibid.) acknowledges the multiple communicative dimensions with which individuals engage with one another within the learning structure or spaces.
3. Language is the element that connects the relationships between individuals in response to their affordances.

The route towards autonomy might be achieved by adopting three approaches, represented by the different circles entitled positivist, constructivist and eclectic approach. Two circles in the middle respectively represent the positivist and constructivist approaches. Their interlocking section represents an eclectic approach, which is further transformed into another circle on the right-hand side. Within the circle on the right-hand side, autonomous learner behaviour emerges from the eclectic blend of both the positivist and constructivist approach to learning. I will explain them one by one.

Positivist approach reflects Crook’s (2004: 79) description of ‘traditional guided instruction’ as: 1) Teacher-led approach to learning. 2) Learners are provided with clearly defined affordances where the ‘intended use is designed into it’ (van Lier 2004: 95). They react to the guidance set by the task to arrive at increased levels of understanding. 3) In a TLE, learner behaviour could be a response to the direction set by the affordance. 4) The technology acts as the ‘conduit’ (Blyth 2009: 175) for the affordance. 5) The external design and selection of appropriate materials stimulates

the learners' personal response to the technology relative to notions of autonomous behaviour.

Constructivist approach reflects the 'socio-psychological' (Little 2006: 203) view of learning where the individual constructs knowledge in response to the world as he sees it: 1) Learners respond to multiple stimuli in the context of their learning environment not simply the direction stipulated by the task. 2) Learners determine the direction of activity and adapt behaviour in response to their learning environment, depending on whether the direction is initiated by the learner or the task. 3) Context supports the development of understanding. 4) Introducing the TLE alters the configuration of the learning structure and technology is an element to which the learners respond. 5) The impact of environmental stimuli stimulates autonomous learner behaviour.

An eclectic approach reflects Little's (2006: 7) view that 'As social beings our independence is always balanced by dependence' and that: 1) The student does not know the target language so needs guidance suggested by direction, and the 'presence or absence of the teacher is not the yardstick by which one can judge autonomous learning skills' (Macaro 2007: 168). 2) It is a restrictive view to suggest that autonomous behaviour is compromised by structure because learning is a personal experience in which the teacher 'cannot control what goes on inside each learner's head' (Little 2000: 9). 3) Learners do not exclusively construct knowledge in response to direction but also to the contextual dimensions created by environmental stimuli. 4) Learning is an experience enabled by social interaction which can be in response to direction initiated by others, as well as that which is initiated by the learner. 5) Autonomous learner behaviour emerges from the eclectic blend of both the positivist and constructivist approach to learning.

In sum, the framework above contextualizes the analysis of the individual's

response to the introduction of the TLE to their learning environment from an ecological perspective, making it possible to work towards gaining understanding about the nature of the relationship between autonomy and the use of a TLE in the context of language learning. It will be further discussed in Chapter 7 based on the data findings.

3.3 Exploratory Qualitative Research

This study was designed as a case study (Yin 2003). The aim was to explore the Hong Kong college students' personal response in terms of their TLE-mediated online activity and their reflections on their TLE experience to identify what this might reveal about the nature of the relationship between autonomy and technology. A case study was considered appropriate for this study as an approach deemed to be effective for the evaluation of 'the subtleties and intricacies of complex social actions' (Denscombe 2003: 35), especially in capturing students' personal response to a technologically mediated Putonghua programme. Data were collected and examined from two dimensions of the learners' personal response to the TLE. The first dimension was self-report data, and the second was observational data. Self-report data enabled the students' perceptions to the TLE-mediated programme to be captured, while observational data provided another data source to corroborate what students said about lessons and what they did with the technology by tracking students' online activity and analysing students' online written work.

Case studies can be qualitative and quantitative in nature, but in this case, they are being used as part of a qualitative method. Qualitative research methods have been shown to be appropriate in developing descriptions and interpretations of phenomena where the features of the problem have not been established (Creswell 1994; Schwandt 1994; Stake 1994). The self-report data in this study was collected mainly

by in-depth interviews (see Appendix B for the interview guide), providing a baseline evaluation of the students' perceptions and experiences of learning Putonghua before the introduction of the TLE, as well as students' perceptions to the following TLE programme. Alternatively, observational data was collected virtually by tracking the students' online movements around the *CM* platform. The analysis of site records allows me to witness whether students log into the site in their free time and the affordances they choose to respond to or ignore, creating a virtual observational presence and stimulating further lines of enquiry in interview.

Characteristics of qualitative inquiry usually include emergent design, human-as-instrument, purposive sampling and early and ongoing data analysis (Maykut and Morehouse 1994). Additional characteristics include a concern with process over outcome, meaning and induction (Creswell 1994). One of the primary methods of inquiry in qualitative research is the in-depth interview. This form of interviewing allows a focus on emergent design and process (since the outcomes cannot be predicted), human-as-instrument, searching for meaning and induction once the interview has been completed. In addition, I adopted an interpretative qualitative approach from the beginning of the research, as it would eventually help me gain an in-depth understanding of 'the subjects' world' (Bogdan 1982: 210), and of complex issues regarding the nature of the relationship between autonomy and technology.

Another reason to use a qualitative approach is to examine issues from a humanistic perspective. In qualitative research, the researcher explores people's reactions and interpretations of the factors that produce such events and conditions (Bryman 1988), suggesting that the qualitative research paradigm provides a dynamic view of social reality, as it examines the effect of social change. This research methodology also supports my position as an insider role (see section 3.8). According to Bryman (ibid.), this position allows the researcher to see and to get close to the

subjects to view the social world as a participant in the setting, giving an opportunity to provide a mirror image of each selected student participant. However, the position fails to give an indication of the exercise of caution and consciousness by the researcher as an outsider through stepping back to view the issues under investigation from an etic perspective. As a result, such position just helps me tease out students' own personal views from an insider perspective.

3.4 Development of *CM*

CM was explored and developed on Moodle, a platform that is used widely across the educational community. Moodle is an open source management system, accessible from any internet connection. It can be downloaded, installed free of charge and needs to be configured to a server. Moodle enables institutions to provide online content by uploading course materials and activities, set project work and assignments and provide a platform for online discussions. Access was password-protected so that only enrolled students could participate.

CM was divided into two modes of delivery which were blended learning in class and free-time access. Blended learning can be variously understood. According to Driscoll (2002), the combination of technology with face-to-face learning; and the integration of technology into the day-to-day learning environment and classroom tasks should be viewed two of the most important elements in interpreting the concept of blended learning. Furthermore, Neumeier (2005: 167–9) advocates that, in developing a blended environment one should consider 'accommodating learners' needs; computer skills; their conceptualization of the technology; the integration of the technology in class; and the balance of face-to-face with computer interaction, to create the feel of the course'.

CM was designed to enhance the students' learning environment but the intention

was that technological functionality should not overwhelm the language or learning experience, as Warschauer (2002: 55) says, 'technology does not constitute a method, rather, it is a resource that can be used to support a variety of approaches and methods'. The aim in the design of the blended learning strand was that the technology should be 'integrated and normalized as a feature of the environment, embedded into the interaction of the classroom' (Bax 2003: 23).

The *CM* blended approach corresponds to Thorne's (2003: 16) definition of blended learning as 'an opportunity to integrate the innovative and technological advances offered by online learning with the interaction and participation offered by the best of traditional learning'. Thorne's definition appropriately describes how technology might be exploited to stimulate autonomy in the classroom, where 'autonomy resides in being able to say what you want rather than producing the language of others' (Macaro 2008: 60).

Free-time access to *CM* was defined as the students' engagement with the TLE beyond the classroom. In this way, one might see whether learners chose to exploit affordances for language development mediated by *CM* in their own time, to examine their reasons for doing so and the value they attributed to their free-time use of the TLE. Examination of learners' free-time *CM*-mediated behaviour might reveal something of the nature of the suggested relationship between autonomy and technology in a context of language learning.

3.4.1 CM Blended Lessons

The pedagogical approach adopted within the blended learning strand reflected the notion of positivist learning (Crook 2004), in that the latter describes how learners responded to the direction indicated by *CM*-mediated materials in class. Table 3.3 provides an overview of each *CM* blended lesson over the study. Blended lessons

adopted familiar characteristics of the traditional classroom lessons with screens leading the teacher and learners through the activities in much the same way as a course book unit might. In this study, each three-hour *CM* lesson was divided into two sessions: one-hour teacher-led session in class and two-hour session in the computer room. In the first session, the teacher ran and led the *CM* lesson from the classroom, where internet access was mainly mediated through the teacher's laptop with a projector. One hour later the second session started and students moved to the computer room, where they would have had individual computers for their own use. Teaching content was designed in collaboration with the teacher to identify relevant topics for the development of materials for the programme.

Table 3.3: Overview of *CM* blended lessons

Lesson titles	**Aim**	**Language skills**	**Lesson activities**	**Additional resources**
Lesson 1: All about you	Question formation, profile writing	Speaking for fluency and accuracy, listening and writing	Interviews and follow-up writing	
Lesson 2: Do you live with your family?	Exchange and response to peer opinions	Speaking, listening, reading	Topical discussion	Extended reading, live link to original article and newspaper website

Lesson 3: What do you do in the morning?	Exchange and response to peer opinions	Speaking, listening, Writing	Topical discussion	
Lesson 4: Taxi, please	Problem-solving	Speaking, listening	Team-work, Prediction task	
Lesson 5: I want to rent a flat.	Problem-solving	Speaking, listening	Prediction task Topical discussion	
Lesson 6: How much is it?	Problem-solving	Speaking, listening, reading, writing	Topical discussion	
Lesson 7: Texting	Exchange of ideas	Speaking for fluency, listening	Topical discussion	Hyperlink for further reading
Lesson 8: Heroes and icons	Vocabulary – similarities and differences in meaning	Vocabulary, speaking, listening, writing, reading	Comparing and contrasting lexical items, paired speaking	Live link to original reading
Lesson 9: How do you relieve stress?	Reading for key point and detail,	Speaking, listening, reading,	Reading and responding to short text,	Video resources

	vocabulary, exchange of ideas	writing	reflect and discuss response to text, reading for detail and questions, post-lesson assignment	
Lesson 10: I just came back from holiday!	Topical discussion, Exchange to peer opinions	Speaking, listening, reading, writing	Individual reading and sharing of ideas	
Lesson 11: I am sick today.	Exchange of ideas, speaking for fluency	Speaking, listening, reading, writing	Topical discussion, posting personal opinions	
Lesson 12: What's your dream-date like?	Topical discussion, expression of personal opinion	Reading for key point, speaking for fluency, listening	Speaking, reading, reflection and discussion, individual reading and sharing of ideas, posting	Extended reading, live link to original text

			personal opinion	
Lesson 13: Class and society	Exchange and response to peer opinions	Speaking, listening, reading, writing	Topical discussion, prediction task, writing and posting of personal opinion	Video resource

CM blended lessons encouraged students to collaborate through discussion and negotiation and to work towards the construction of a piece of computer-mediated writing in response to the lesson. TLE-mediated lessons were highly visual and enhanced by the functionality of the technology. The flexibility of a TLE means that it can be integrated into multiple environments, blurring the boundaries between traditional and technology-enhanced activities in class. Table 3.4 shows a *CM* lesson where the boundaries between traditional and technology-enhanced activities are blurred.

Table 3.4 An example of *CM* lessons – lesson 7 texting

Stage 1: Warmer – Whole-class speaking and listening	● Warm-up discussion questions about the topic. ● Follow the link to the second stage.
Stage 2: Lesson 7 Texting –Vocabulary, problem solving	● Task: Students were asked to translate ‘weird’ Putonghua words

	and phrases presented in text language. ● Extension: Screen simultaneously provides a link to an external website, with different examples of 'weird' Putonghua words and phrases in text language. ● Follow the link to stage three.
Stage 3: Reading for theme, paired speaking and listening	● Short texts described that the Chinese media reported intensively the negative impacts of text language to formal writing conventions. ● Extension: Link to a longer text. ● Students begin to have discussions and show their views pairly. ● Follow the link to stage four.
Stage 4: Reading for theme, whole-class speaking and listening	● Students begin to read short texts, exchanging ideas with their classmates in the whole class. ● Follow the link to stage five.
Stage 5: Reflection and writing	● Students begin to write and post their own comments in the forum.
Post-lesson assignment: Feedback from the teacher	● Students receive feedback from the teacher on their comments in the

	forum.

3.4.2 CM Free-time Access Overview

The pedagogical approach adopted within the free-time strand of *CM* reflected the notion of constructivist learning (Crook 2004), in that the latter provides learners with a rich and resourceful environment. In short, the free-time access of *CM* offers learners with many opportunities to engage with Putonghua beyond the classroom. With learners engage with language development activities mediated by technology in their free-time, the choices they make provide indicators about the characteristics and types of activity most likely to stimulate autonomous engagement with the TLE and the target language beyond the classroom.

Digital content can be adopted, added to and changed during an online programme in response to the learners' preferences, unlike traditional paper-based courses. Examination of the characteristics of affordances students are most and least responsive can be used to inform ongoing content development and analysis of notions of autonomy during the learning programme. This is also particularly true with students' free-time activities, as they log into the site of their own volition unlike the blended lessons in which they are directed by the teacher to the lesson.

The free-time strand within *CM* gave learners access to a new space labelled as 'Your Space'. This space provided two different kinds of forums: expert- and student-led forums. Within the space, students were given a series of links to established Putonghua sites, in which they could make more interesting exercises.

3.5 Context of Research

3.5.1 The Putonghua Programme

As mentioned in section 1.4, CPCE where the current study was conducted is a self-financed community college. CPCE has been growing fast in recent years, and has become more attractive to secondary school leavers, due to the increasing challenge for securing a job upon graduation. In order to sustain this advantage, different kinds of short-term language courses are held in CPCE, such like Spanish, English, German, Hindu, etc. However, it is not surprised that the English and Putonghua courses are still more popular due to their pragmatic considerations: Most students in CPCE are from ordinary families, and they hope to get a medium-income job in a company upon graduation. Mastery in biliteracy and trilingualism, in terms of Putonghua and English, as well as a vibrant local language – Cantonese, is a basic requirement to obtain and grip such an opportunity.

The study was conducted in the context of a Putonghua programme for three major reasons. First, I taught Putonghua for many years, so it is a learning environment with which I am familiar. Secondly, the learning environment of the Putonghua programme, in terms of the *CM* blended lessons and free-time strand, allows to investigate if and how the students should develop their autonomy in the face of the introduction of the technology, without the need for radical restructuring of the classroom, by keeping the presence of the teachers. Lastly, a shift in pedagogical approaches of teaching Putonghua has happened in Hong Kong from traditional attention of grammar-translation to a more communicative model (Manteca Aguirre 2006). In other words, a new pedagogical approach with communicative language teaching has been recommended so that students should work towards becoming competent users of Putonghua, rather than focusing exclusively on formal aspects of Putonghua. Such a transformation has proved more difficult to achieve in practice, but it also has provided a specific context in which students' exposure to Putonghua was strengthened, identifying the technological mediated learning environment as their

only space of practicing Putonghua, especially in the absence of real-world opportunities to use Putonghua extensively.

3.5.2 Sampling

The major research participants are first-year associate-degree students in the CPCE, whom enrolled in a technologically mediated Putonghua programme, respectively from five different departments of tourism and hospitality management (THM), accounting (AC), social science and humanities (SSH), marketing (MAR) and engineering (ENG). I relied upon 'convenience sample selection' or the 'non-random selection technique' (Soriano 1995: 38) to find suitable interviewees, given the nature of the study.

Sampling techniques in qualitative studies differ from quantitative sampling, which relies heavily on the random selection of research subjects (Maykut & Morehouse 1994). Since this qualitative research seeks to 'gain a deeper understanding of some phenomena experienced by a carefully selected group of people' (Maykut & Morehouse 1994: 56), purposive sampling was used to provide the information sought in this study. As Maykut & Morehouse (ibid.) state, 'This approach to purposefully selecting people for a study acknowledges the complexity that characterizes human and social phenomena'.

Hence, it is not my goal in this study to build a random sample, but rather to select a group of students within a case study organization that I believed will represent the range of experience of the phenomena in which I am interested. The sample size for the in-depth interviews was 10 in this study, as recommended by Carliner (1997), stating that the desired sample size for the in-depth interviews is eight to twelve people. The number of interviewees is less important, however, than the ability of each to reflect on and relate their experiences within the organization

(Taylor & Bogdan 1984).

First, an invitation letter for participation (see Appendix A) was sent by email to all first-year associate-degree students who took the 13-week technologically mediated Putonghua programme. Twenty-five students, consequently, were willing to participate in this study voluntarily. Most of them were born, grew up and completed their secondary education in Hong Kong. Fifteen, however, had parents who are migrants from mainland China. In other words, they usually communicate with each other in Putonghua at home. Learning Putonghua is thus not an issue for them, and they have not been included in the target population of this study. Therefore, 10 student interviewees were involved in the study. The basic profile and relevant description of the participants are represented in Table 3.5 and Table 3.6 respectively.

Table 3.5: Profile of the Participants

Name	**Age**	**Gender**	**Department**
Kai	20	M	SSH
David	20	M	SSH
Yoko	21	F	AC
Vicky	20	F	THM
Siu	19	F	THM
Zoe	18	F	THM
Simon	20	M	MAR
Amy	20	F	ENG
Mark	21	M	AC
Carol	20	F	AC

Table 3.6 Description of the Participants

Name	**Description**
Kai	Kai was an outspoken and down-to-earth young man. He hoped to pursue further postgraduate studies at a top university in mainland China upon

	graduation. He thought that he had to speak Putonghua more fluently, because by then the medium of instruction of the university is Putonghua.
David	David was quiet and shy in public. However, he was more positive to express himself in the virtual world. He had a girlfriend from Taiwan in a virtual community. In order to sustain this relationship and have a nice communication with her, he needed to strengthen his Mandarin (Putonghua).
Yoko	Yoko was born in a middle-class family. She dreamed to be a chartered accountant in a reputable accounting firm. Considering the integration of China with Hong Kong after takeover in 1997, she clearly knew that learning Putonghua would definitely help her getting an offer.
Vicky	Vicky, Siu and Zoe were good friends and were from the same department of THM. Unlike both of her friends, she seemed to lack strong interests in learning Putonghua. As she said, 'I come here because I think it may be fun and I want to accompany my friends'.
Siu	As a student from the department of THM, Siu hoped to become a local tour guide. With more and more Chinese tourists come to Hong Kong, she felt that it is necessary to learn Putonghua well. Consequently, she was going to take part in the Putonghua proficiency test.
Zoe	Zoe was also from the department of THM and was eager to be a flight attendant. Hence, at the very beginning she had understood the importance of mastering in learning English and Putonghua. She intended to watch a series of Chinese dramas, expecting to learn Putonghua in a way of daily life.
Simon	Simon looked more mature than his young counterparts, even though he

	was just 20 years old. As a student from the department of marketing, he wanted to equip himself with relevant knowledge. Upon graduation he decided to establish a startup company in the Guangdong-HK-Macao Greater Bay Area. Learning Putonghua is thus the essential first step.
Amy	Amongst all the participants, Amy was the only student from the department of engineering. According to her, many engineering-disciplined students were weak in the abilities of learning a second/foreign language. She did not think so and wanted to break this tradition, by drawing on her own case.
Mark	As an elder son in the family, Mark needed to support his parents by working in a part-time way. He had already set a clear objective to be an insurance agent upon graduation. Mark thought that if he could have mastery in Putonghua, he would be able to attract more Chinese clients.
Carol	Carol is Mark's girlfriend. In her eyes, Mark is an independent and hardworking person. By acknowledging his objectives and endowments, Carol was willing to participate in the Putonghua programme with him together, realizing their common goal.

3.6 Data Collection

In applying the data-collection methods, Yin (2003: 46) reminds us that 'the study cannot rely on a single data collection method but will likely need to use multiple sources of evidence'. Therefore, I decide to use two principal methods for data-collection, namely in-depth semi-structured interviews, in the form of group, pair or individual, and observations of the students' *CM* blended lessons and their online written work. Relevant details of the methods used are presented below.

3.6.1 Semin-structured Interviews

The most significant attribute of a situation that should drive any researcher to employ a qualitative approach is the need to understand the perspective of another, and the prime method for doing so is an interview (Bogdan & Biklen 1982; Brookfield 1987). An interview allows the opportunity to discover subjects' perceptions of their environments, of their own actions or of the actions of those around them (Merriam 1988; Patton 1990). In addition, the interview can elicit their 'ideas, feelings and emotions' (Brookfield 1987: 2) in their own words. As Reinhartz (1992: 19) has pointed out, 'interviewing offers researchers access to people's ideas, thoughts, and memories in their own words, rather than the words of the researcher'. As such, researchers can explore a few general topics to assist in uncovering the participants' perspectives. In other words, both the researchers and the participants share and learn throughout the interviewing process in a reciprocal manner. Maykut and Morehouse (1994: 80) suggest an interview length of one and a half to two hours, which 'allows for rapport building and permits the researcher to listen for themes that may emerge from the participants' conversations'. I relied on the interviewees' willingness and ability to engage in study-relevant conversation for these extended periods of time.

3.6.1.1. Individual Interviews

As mentioned earlier, in the current research, there are 10 interviewees that I attempted to access in this study. The interviews were arranged by email. Once a date and time for each interview was confirmed, I scheduled each on my daily calendar as a reminder. In that way, confidentiality could be maintained. The type of interview was an in-depth one, in the form of group, pair or individual, and each of the interviewees was asked the same set of questions. The interview guide (see Appendix

B) served as a basis from which I would prompt further questions where necessary and attempted to draw detailed responses from the interviewees. To prompt the interviewees, I employed listening skills, personal interaction, question framing and probing for elaboration (Marshall & Rossman 1999). Table 3.7 below provides a brief summary of all interviews conducted with students throughout the three stages, which covered first-, middle- and later-phase of this programme. More details of these interviews, in terms of number, form (group, pair or individual) and purpose/focus, can be found in Appendix C.

Table 3.7 A brief summary of all interviews throughout three stages

Stage	**Date**	**Focus**
1st	5 Jun 2017 – 30 Jun 2017	● Secondary school learning experience; ● First-week learning experience in this programme; ● Self-evaluation of degree of autonomy; ● Degree of control over learning process; ● Role of teachers and students.
2nd	3 Jul 2017 – 28 Jul 2017	● Describing own experience in TLE; ● Any benefits from this programme; ● Impact of this programme on learning Putonghua; ● Evaluation of current similar programme held in other colleges; ● Evaluation of and suggestions for this programme.

3rd	1 Aug 2017 – 25 Aug 2017	• Looking back at traditional classroom learning and comparing it with learning in a TLE; • Learning for exams or not, why? • Feeling of loss, confusion and puzzlement or not, why? • Lack of interest in learning or not, why? • Responsibility in implementation task-based activities in the blended class (i.e. setting goals, keeping plans and evaluating own Putonghua learning).

As shown in Appendix C, for students, there were more group or pair interviews than individual interviews. A group usually contained three to four students. In the face of the choice between individual and group interviews, most students preferred to be placed in groups or pairs. One of the reasons was that students would be more comfortable if they were with another student or in a group. Another reason was that group or pair arrangement gave rise to more discussion and sparking of ideas and insights. A third reason was that I wanted to target a relatively large sample to ensure a greater variety and a more complete picture of insider perspectives, although this eventually entailed a huge amount of time used for subsequent transcription. Relevant details and importance of the pair and group interview will be discussed in the next section.

In the interview process, all interview questions were semi-structured, as I hoped to create a supportive environment in which discussion and differing points of view

were encouraged. For example, although there were broad topics I intended to investigate, I always tried to keep my initial prompts as open as possible and to let the participants guide the topic, the purpose of which was to gain a deeper understanding from learner perspectives. Semi-structured interviews thus gave interviewees the opportunity to discuss their perceptions, preference, attitudes and beliefs about the TLE so that they could direct the flow of the conservation, based on their own interpretation of events.

In practice, the focus of the discussion with interviewees always has a shift more or less. For instance, most of the interviews were about several specific issues of learning Putonghua with technology and interviewees' perceptions about the impacts upon their learning behaviour brought by the introduction of a TLE, but the emphasis usually shifted to general teaching and learning issues. A simple reason was that it was easier and more natural for students to start conversations with me by focusing on their personal comments on individual learning experiences and the whole learning environment that affects their learning. Based on my insider knowledge, they had more to say (including complaints and criticisms) about teachers' teaching performance and college administration.

With the permission of the interviewees, I audio-recorded all the interviews with an MP3 device. After each interview was conducted, I immediately reviewed the raw interview notes, clarified when necessary and added field notes. I then transcribed it using Microsoft Word and Excel, noting feelings, reactions and patterns in the data. When I could not find time for transcription immediately after the interview, I chose to conduct the interview and at the same time took notes for convenient ongoing data analysis.

I also collected pre-requested literature, brochures, data and other documents. Some of the interviewees explained the significance and meaning of these documents.

I also noted these comments while recording interviewees' scripts during interviews. Generally, I attempted to create a relatively relaxing environment, in which interviewees were very forthcoming and were able to express their views freely. The interview transcripts show that in any given interview, the proportion of participants' talking time to my own was about 10:1. This also ensured that all interviewees made free expressions of their own views.

Data extracts originally in Chinese were translated into English and marked 'translation'. For all extracts, pseudonyms (only recognized by the researcher) were assigned to students to ensure confidentiality, while "R" stands for the researcher in interviews or informal conversations.

3.6.1.2 Pair and Group Interviews

Like individual interviews, pair and group interviews also have the advantage 'to provide data on respondents' attitudes, feelings, beliefs, experiences and reactions' in an effective way (Morgan 1997: 40). More importantly, according to Bryman (2004) a number of additional reasons are presented: 1) To discuss with people who have shared a certain similar experience. 2) To understand the reason about why people think they should do. 3) To develop a few issues and opinions that are not anticipated by the researcher. 4) To make brainstorming by some arguments and replies happened among participants.

It encouraged my attempt of gathering the participants together, by discussing certain issues related to the research and investigating if they responded to each other's perceptions. For instance, how did they learn this target language outside the Putonghua programme? How did they evaluate about their teachers? Were any reflections developed further in their blended lessons and free-time strand? Pair and group interviews thus served to integrate the experiences of others into individual

perceptions. Gathering the participants together in a pair/group interview will be helpful in collecting useful data and theming them into different categories (David and Sutton 2004).

3.6.2 Conducting the Semin-structured Interviews

In conducting the research methods, access to the students was obtained first through talking to the Director of CPCE and then through talking to the programme leader. Because of my status as a part-time lecturer and course leader in CPCE, students who participated in this Putonghua programme were actually familiar with me and mutual trust has already been established between us, even though I did not carry out any teaching duty to them in the programme (see section 3.9).

Before conducting the interview, relevant interview questions were reviewed a couple of times by me to make sure that they were well prepared. However, if during an interview a new issue in relation to the study emerged, this was added into the interview questions and asked to the future participants. After conducting and transcribing all the interviews I set a final version of the interview questions. While comparing initial data collected from individual interviews, a gap could be created in terms of several differences between these individual participants' responses to the interview questions. This pushed me to conduct the pair and group interviews. The process of inviting the students to take part in the pair and group interviews was encouraging, as many students seemed to prefer being interviewed in the way of pair and group. Three major reasons were discussed in section 3.6.1.1.

As mentioned earlier, ten students were selected to participate in the interview in the form of individual, pair and group. The interviews were conducted over a period of three months, from June 2017 to August 2017 (see Appendix C). Total three rounds of interviews were conducted throughout three different periods. Within each round,

10 individual interviews were implemented first, and then 13 group interviews and 14 pair interviews were carried out respectively. Table 3.8 indicates the participants and exact dates that the interviews were conducted in each round of interview:

Table 3.8 Dates and participants in each round of interview

Round 1 (5 June-30 June)	**Types of the interviews**		**Types of the interviews**		**Types of the interviews**
Date	**Individual**	**Date**	**Pair**	**Date**	**Group**
5 June	Vicky	15 June	Kai & Siu	16 June	Vicky, David, Yoko
	David		Zoe & Amy		Kai, Simon, Zoe
	Yoko	19 June	Mark & David	20 June	Siu, Amy, Mark, Carol
8 June	Kai		Yoko & Carol		Yoko, Kai, Simon
	Simon		Vicky & Zoe		David, Simon, Mark
	Zoe	23 June	Amy & Mark	22 June	Amy, Kai, Yoko
12 June	Siu		Carol & Zoe		Siu, Mark, Kai, Zoe
	Amy		Kai & Simon		Mark, Carol, Vicky
	Mark	26 June	Mark & Zoe	27 June	Zoe, David, Carol
	Carol		Siu & Zoe		Simon, Carol, Siu
			Kai & Yoko		Mark, Vicky, Carol
		29 June	David & Amy	30 June	Simon, David, Carol, Zoe
			Carol & Amy		Yoko, Zoe, Mark, Vicky
			Simon & Mark		

Round 2	**Types of**		**Types of the**		**Types of the interviews**

(3 July-28 July)	**the interviews**		**interviews**		
Date	**Individual**	**Date**	**Pair**	**Date**	**Group**
3 July	Vicky	13 July	Kai & Siu	14 July	Vicky, David, Yoko
	David		Zoe & Amy		Kai, Simon, Zoe
	Yoko	17 July	Mark & David	19 July	Siu, Amy, Mark, Carol
6 July	Kai		Yoko & Carol		Yoko, Kai, Simon
	Simon		Vicky & Zoe		David, Simon, Mark
	Zoe	21 July	Amy & Mark	24 July	Amy, Kai, Yoko
10 July	Siu		Carol & Zoe		Siu, Mark, Kai, Zoe
	Amy		Kai & Simon		Mark, Carol, Vicky
	Mark	25 July	Mark & Zoe	26 July	Zoe, David, Carol
	Carol		Siu & Zoe		Simon, Carol, Siu
			Kai & Yoko		Mark, Vicky, Carol
		27 July	David & Amy	28 July	Simon, David, Carol, Zoe
			Carol & Amy		Yoko, Zoe, Mark, Vicky
			Simon & Mark		

Round 3 (1 Aug-25 Aug)	**Types of the interviews**		**Types of the interviews**		**Types of the interviews**
Date	**Individual**	**Date**	**Pair**	**Date**	**Group**
1 Aug	Vicky	7 Aug	Kai & Siu	9 Aug	Vicky, David, Yoko
	David		Zoe & Amy		Kai, Simon, Zoe
	Yoko		Mark & David		Siu, Amy, Mark, Carol

3 Aug	Kai	11 Aug	Yoko & Carol	14 Aug	Yoko, Kai, Simon
	Simon		Vicky & Zoe		David, Simon, Mark
	Zoe	16 Aug	Amy & Mark	17 Aug	Amy, Kai, Yoko
4 Aug	Siu		Carol & Zoe		Siu, Mark, Kai, Zoe
	Amy		Kai & Simon		Mark, Carol, Vicky
	Mark	18 Aug	Mark & Zoe	22 Aug	Zoe, David, Carol
	Carol		Siu & Zoe		Simon, Carol, Siu
			Kai & Yoko		Mark, Vicky, Carol
		24 Aug	David & Amy	25 Aug	Simon, David, Carol, Zoe
			Carol & Amy		Yoko, Zoe, Mark, Vicky
			Simon & Mark		

3.6.3 Observations

Observations, on the other hand, were a complementary data-collection method outside the interview context. In this study, observational data were collected by observing the students' *CM* blended lessons and virtually tracking their free-time online movements around *CM*. As indicated in section 3.4.1, each three-hour *CM* lesson was divided into two sessions: one-hour teacher-led session in the traditional classroom and two-hour session in the computer room. I chose to participate in different sessions of eight *CM* blended lessons according to my own availability. Table 3.9 below provides a summary of all observations in terms of timeline and type of session.

Table 3.9 A summary of all observations in *CM* lessons

Date	**Type of Session**

7 June 2017	Both sessions
14 June 2017	One-hour teacher-led session
21 June 2017	Two-hour student-led session
12 July 2017	Both sessions
26 July 2017	Two-hour student-led session
9 August 2017	Both sessions
16 August 2017	One-hour teacher-led session
23 August 2017	Two-hour student-led session

During the observation, I found that some students seemed to lack enough learning interests in the teacher-led session. For example, I could easily see some students reading novels or magazines, or doing other things. Occasionally, I could even see that several students were taking a nap in the one-hour session. However, when these students came to the computer room, they seemed to become more active. For instance, they were willing to take part in more peer discussion in the target language, particularly to some topics they were interested in. The reasons would be explained in length in Chapter 5.

On the other hand, the analysis of students' free-time site records allows me to witness whether they logged into the site and the affordances they chose to respond to or ignore, creating a virtual observational presence in their free time and stimulating further lines of enquiry to follow up in interview. For example, in an online context students may choose not to reply to or to generate forum threads, but this does not necessarily represent inactivity. Tracking explicit written interaction reveals just part of a student's online story, the tracking of a student's implicit interactions reveals their 'silent' onsite choices, such like choosing and following one link over another.

More importantly, student assignments following TLE blended lessons and forum posts can be examined for recurring themes in an attempt to capture explicit references to the direction taken in class discussions, which can be followed up in interview. Students' free-time posts can be examined for the development of ideas along the 'post trail' thereby indicating students' implicit interaction (reading) and explicit interaction (writing) if they choose to respond to one another online, raising several lines of enquiry in interview. Some examples of these students' assignments and posts can be found in Appendix D.

3.7 Data Analysis

This section will first present the thematic data analysis approach, in terms of transcribing and generating of the themes and codes. Then it will illustrate the data analysis procedure by drawing on three specific research questions.

3.7.1 Thematic Data Analysis

Patton (1990: 371) states that 'the culminating activities of qualitative inquiry are analysis, interpretation, and presentation of findings.' The challenges are to identify significant themes and general patterns and construct a framework for communicating what the data reveal (Patton 1990). In line with this conceptualization, I did not follow a linear progression in which data were collected, analysed and then reported, but rather assumed a cyclical or iterative process (see Figure 3.2) – collecting initial data, conducting ongoing data analysis, through which understandings of certain issues were gained, putting the evolving understandings to test through additional, more focused data collection until the point of achieving saturation. Details of the data analysis stages are presented in the following sections.

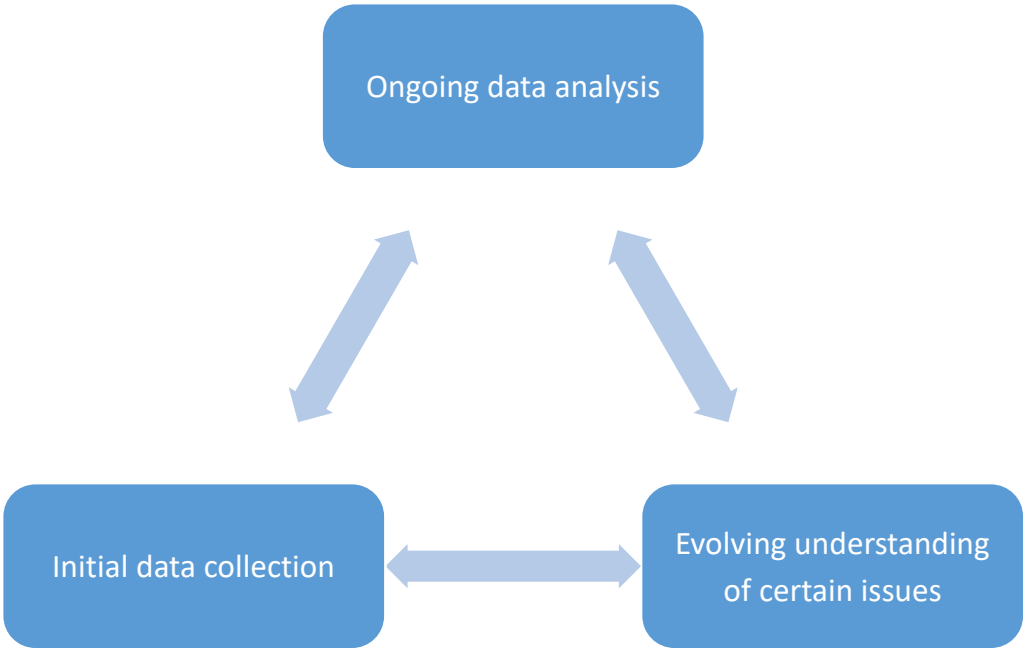

Figure 3.2: A cyclical process of data analysis

3.7.1.1. Transcribing

The transcribing process is a stage of data preparation and familiarization before further analyzing data. First of all, it required listening to every voice recording carefully as interviews were held. In line with it, certain necessary notes were made so that to obtain a holistic picture and accurate records of each interview. In order to label and categorize the data more clearly, Ball (1991) suggested that we would be aware of those points in relation to the research questions while making short notes. By adopting this principle, I found that the transcribing process actually became less time-consuming and could provide a focused selection of codes, which assisted in producing a transcript that could be transformed into a text related to the research questions.

During the interview the participants' views were gathered by giving them enough time to express their ideas fully without interruption. However, two new

issues needed to be paid attention for making the transcription ‘fitness for purpose, adequacy, and accuracy’ (Richards 2003: 199). On the one hand, as Lapadat and Lindsay (1999) argued, transcribing itself is a process of interpreting, in which the participants’ voices might be involved in the researcher’s own decision-making. Thus, it required me to deal with the ethical dilemmas surrounding transcription more carefully. On the other hand, I was also sensitive to observe the participants’ body language, such like their gestures and the way they talked (i.e. speaking tone).

3.7.1.2 Codes and Themes

In this stage, codes and themes would be summarized based on the previous transcribing process. This process was informed primarily by Palfreyman’s (2001) ‘annotating and regrouping strategy’, which suggests that a study attempts to be exhaustive and account for all the relevant information. In short, this strategy (ibid.) could be divided into three steps:

1) Annotate each dataset, highlighting themes that seem significant in the light of previous data or that indicate possible new directions;
2) Look for recurring themes in the annotations of each dataset;
3) Compare, combine and regroup the data under headings corresponding to themes in the annotations and text.

With the increased volume of verbal data, it was essential to look for connections in the disparate data I had been noting and to develop concepts and categories for interpreting the data. In this way, relevant material made by the interviewees became more focused, predominant themes began to emerge, insights grew and theoretical perspectives gradually started to be grounded in the data gathered. In short, when the general process of data collection came to an end, and when specific research focuses

began to emerge from the data with continuous reference to the relevant material conceptualized from the initial stages of the study, the overall dataset was approached again, through similar procedures as above, which can be described as bases for analysis. Figure 3.3 illustrates three different stages that were used in generating the codes and the themes in the study.

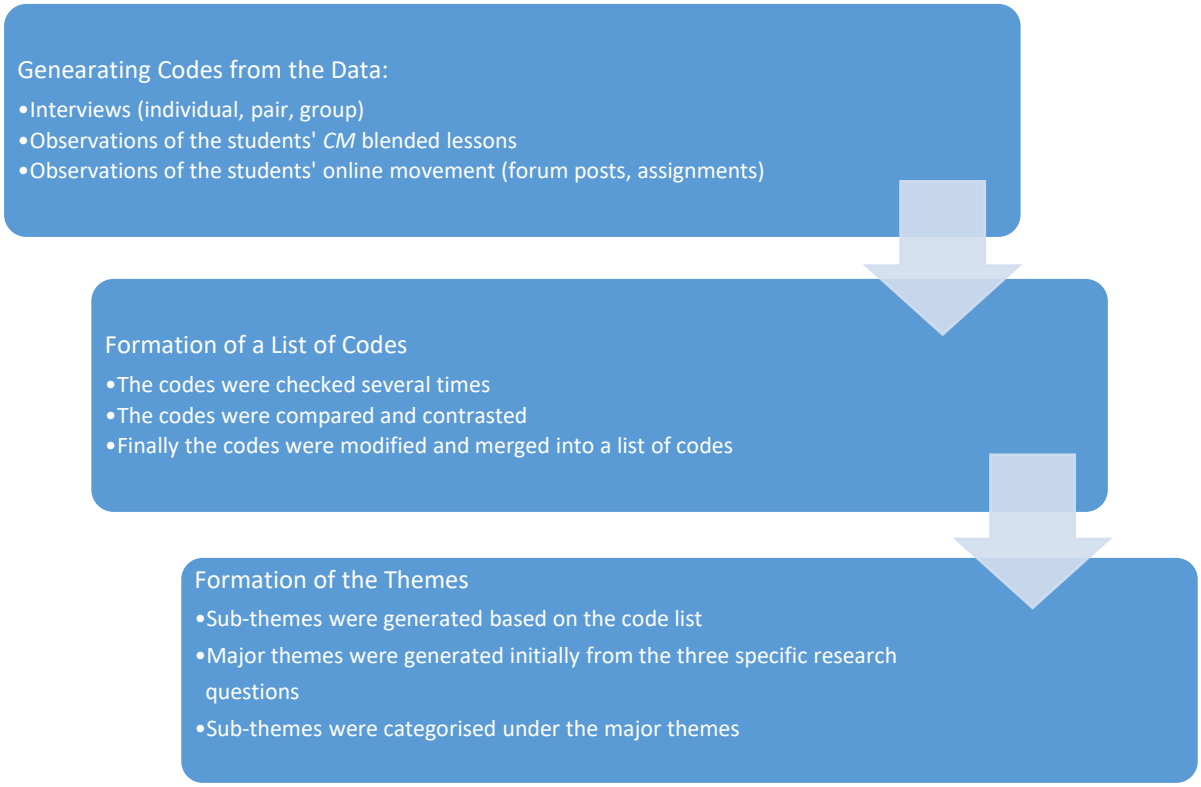

Figure 3.3 Three Stages of Generating the Codes and Themes

Following the three stages, data collected were divided under headings reflecting the three specific research questions. These headings were: Firstly, exploring the general concept of learner autonomy in relation to technology by investigating the students' perceptions and experiences of learning Putonghua with technology before the introduction of the TLE. Secondly, understanding the relationship between autonomy and technology, by looking into the students' personal responses to the TLE

in their blended lessons. Finally, the same relationship will be explored in relation to the students' personal responses to the TLE in their free time.

3.7.2 Data Analysis Procedure

In this section the data analysis procedure will be presented based on two major research methods: semi-structured interviews and observations of the students' blended lessons and their online movements. As mentioned above, the analysis approaches are also divided under headings reflecting the three specific research questions, with reference to the relationship between autonomy and technology, as follows:

1. First, exploring the general concept of learner autonomy in relation to technology by investigating the students' perceptions and experiences of learning Putonghua with technology before the introduction of the TLE.
2. Secondly, understanding the relationship between autonomy and technology, by looking into the students' personal responses to the TLE in their blended lessons.
3. Finally, understanding the relationship between autonomy and technology, by investigating the students' personal responses to the TLE in their free time.

The data analysis procedure is intended to explore the nature of the relationship between autonomy and technology by investigating three main research areas, all of which focus on the students' response, starting with their response before the introduction of the TLE, then their response in the blended lessons, and finally their response in the free-time strand. Two thematic analyses were thus conducted in different stages in the study. First, the students' response before the introduction of the TLE was explored in the preliminary analysis stage, by using a basic thematic analysis tool to generate major themes and subthemes. Secondly, the in-depth analysis

will be compared with the data generated from the first stage throughout two steps. Step one intends to understand the students' response in the blended lessons, which will help analyzing step two that seeks to identify the students' response in their free-time strand. The two steps both use a framework for autonomy in a TLE adapted from Macaro (2007) to capture and categorize the instance of autonomy. More details will be presented in the following sections.

3.7.2.1 Exploring the students' perceptions before the introduction of the TLE

This section will first examine the students' reflections and perceptions about effective language learning and on their current learning environment, and their learning experiences with technology. This will provide baseline information for consideration alongside their subsequent response to the introduction of a technologically mediated Putonghua programme. The nature of the data collected is of a narrative type due to the investigation of their own perceptions. The purpose of these perceptions was to give a general view of the students' own experiences, opinions, and views on their expected learning environment. The students' perceptions constructed one kind of new knowledge that they have developed over the years, which means that they might predict their future effective language learning. Knowing this would help to compare the differences between students' responses, especially before and after the introduction of the TLE. The analysis approach has descriptive themes, which will assist in capturing the students' general perceptions of learning Putonghua with technology before the introduction of the TLE.

3.7.2.2 Understanding the relationship between autonomy and technology in the blended lessons

The second part of the data analysis procedure is where I explore the relationship

between autonomy and technology shown by the students' personal response in the blended lessons, which are collected by the interviews and observations. By examining what they actually perceived and behaved in the face of the opportunities for autonomy in the blended lessons, the goal of the investigation was to indicate if there were any types of learner autonomy presented by the students and why they used them. The aspects of learner autonomy that the students might show can be divided into two main categories: proactive and reactive autonomy, which is adapted from Littlewood's (2009) division (see section 2.5.1). Proactive autonomy refers to that the direction of the activity is initiated by learners so that learners could take charge of own learning, determine own objectives, select methods and techniques for learning, and evaluate learning. Reactive autonomy refers to that the learners attempt to regulate the activity once the direction has been set. Direction of the activity, therefore, is initiated by others so that learners could organize learning resources and reach goals.

To be able to address the step I am using the framework for autonomy in a TLE adapted from Macaro (2007) to capture and categorize the instance of autonomy. According to this framework, the notion of autonomy is characterized by students' 'internal-cognitive' (Little 2007:14) capacity to engage proactively or reactively with the TLE in the blended classroom, incorporating the sense in which learning is a 'social-interactive' (Oxford 2003: 85) experience between the individual and the environment. For instance, in blended lessons, learners cognitively engage with the class, follow the tasks determined by the structure of the lesson, and in so doing formulate their own observations, decisions, reflections and evaluations, manifesting signs of 'reactive autonomy' (Littlewood 2009: 75). Alternatively, learners might go off-task, charting their own path, exploring alternative avenues and resources, suggestive of 'proactive autonomy' (ibid.).

In addition, activities for *CM* blended lessons were designed to encourage learners to choose to use Putonghua more extensively in class and to extend their engagement with the language beyond the classroom. *CM* tasks were designed to encourage learners to focus 'more on using forms than on the forms themselves' (Warschauer & Healey 1998: 57). The following example (Table 3.10) shows an activity designed to engage learners in lively classroom discussion around the computer, focusing on fluency rather than accuracy. By design, this task of *CM* blended lessons attempts to encourage students to collaborate through discussion and negotiation.

Table 3.10 An example of *CM* blended tasks – speaking for fluency

Talk to your partner (or in open class)

It is increasingly suggested that we are living in a 'nanny state' where we are told what to do, how to behave and what choices we should be making about our lives.

Who should take responsibility for your good health and well-being and why?

1. You – the individual
2. The government
3. The health professionals
4. All of the above

3.7.2.3 Understanding the relationship between autonomy and technology in the free-time strand

The third part of the data analysis procedure discusses the students' personal responses in their free-time strand, which are gathered by the observations of their

online movement. To analyse the data gathered I still used the framework for autonomy in a TLE adapted from Macaro (2007) to capture and categorize the instance of autonomy. Along this line, data analysis might be presented by seeing whether students chose to engage with affordance that corresponded more closely with a TLE learning programme in their free-time.

For example, free-time access to *CM* was defined as the students' engagement with the TLE beyond the classroom, such like from their laptop, library computers, internet café or at home. In this way one might see whether learners chose to exploit affordances for language development mediated by *CM* in their own time, to examine their reasons for doing so and the value they attributed to their free-time use of the TLE. Examination of learners' free-time *CM*-mediated behaviour might reveal something of the nature of the suggested relationship between autonomy and technology. As mentioned earlier, the free-time strand within *CM* gave learners access to a block labelled as 'Your Space', which appeared at the top of the opening screen of *CM*, making it easy for students to locate. 'Your Space' provided students with a series of forums and students could access to a chat facility. Two of the forums (the News Forum, and the Read, Think and Reply (RTR) Forum) were expert-led.

The News Forum operated as the *CM* notice board to pass on updates and information about the TLE to the participants. The RTR Forum proved extremely popular, and students were invited to respond in their free time to weekly expert-generated discussion threads. Unlike assignments, students received no expert feedback on their forum postings. Illustrations and rubric on the opening screens of each forum above explained the purpose of these virtual spaces to the students, as shown in Table 3.11.

Table 3.11 *CM* forums and rubric

News forum: General news and announcements from *CM*.

RTR: Discussion topics will be posted for you each week and you can choose whether you want to read, think and reply. This forum will give you something to think about. Before you post a reply, think about what you are going to contribute. Your teacher may use some of the ideas you raise in this forum in the classroom. Remember to check this forum regularly for new discussion threads.

RTR threads provided discursive tasks, designed to stretch the students linguistically and to intellectually stimulate students' free expression of ideas in Putonghua. Table 3.12 provides a list of the weekly free-time expert-generated threads posted to the RTR forum, giving an indication of the range of topics to which students were invited to respond to.

Table 3.12 Topics of weekly free-time expert-generated threads on RTR

- Daydreaming
- The most surprising thing…
- Film for a friend
- The first thought that comes to mind
- What do you think about…?
- The best age to be…
- I wish more people would take notice of…
- Happy times
- Letter writing
- Valentine's day message
- Christmas message

● The next few years…

The nature of the students' interaction with the RTR Forum allowed for the examination of issues relating to learner choice, perceptions about language development, online free expression and peer interaction. Expert-generated threads within RTR created a context designed to encourage the practice of multiple language skills, the online generation of ideas and the sharing of different viewpoints. Alternatively, student-led forums created a space where learners could generate threads, post thoughts and experiences. Students' free-time engagement with student-led forums compared to the expert-led RTR Forum provided a rich context from which to examine the significance of structure within the concept of autonomy.

3.7.3 Summary

In the above sections, the data analysis tools and the data analysis procedures were discussed. Table 3.13 summarizes how the three specific research questions are relation to the major and sub-themes with the help of the data analysis procedures.

Table 3.13 A Summary of the data analysis procedures, major themes and sub-themes in relation to specific research questions

Specific research question (SRQ)	**Data analysis procedure**	**Major themes**	**Sub-themes**
SRQ1	Basic thematic analysis	Positive student perceptions	● Guidance and support from the expert ● Making of clearly

			defined aims ● Learning from mistakes ● Self-expression ● Interaction
		Negative student perceptions	● Inauthentic use of language ● Communicatively restrictive ● Reduced personal responsibility ● Interaction
SRQ2	Analysis of a TLE autonomy framework (adapted from Macaro 2007)	Proactive autonomy	● Freedom and choice ● Explicit interaction in terms of writing and speaking ● Self-directed & relatedness to personal experience
		Reactive autonomy	● Reactively responding to the task, lesson and others ● Reactively following direction and

			interacting with peers and lesson ● Implicit interaction in terms of reading and listening
SRQ3	Analysis of a TLE autonomy framework (adapted from Macaro 2007)	Proactive autonomy	● Writing forum posts ● Discussing with classmates ● Reading additional resources
		Reactive autonomy	● Writing assignments requested from the teacher ● Reading forum posts from the classmates ● Responding to Student-generated RTR threads

3.8 Researcher Position and Site Entry

Before conducting this study, I had been a full-time Putonghua lecturer and course leader in the CPCE for more than six years. During the EdD studies at the University of Bristol, I transferred my status of employment into a part-time mode in order to have more time to study. However, my “insider” role in CPCE did not undergo significant changes. For instance, I could still have free access to offices of the

department or the college. I was allowed and encouraged to continually be the Putonghua course leader to maintain a closed relationship with my students, and could attend relevant staff meetings and other activities for teachers and students if I wanted to. In fact I found that such an insider status allows me have greater flexibility to conduct the study.

Any research involving human participants has to face the issues of negotiating site access to ensure an optimal condition for data collection and the protection of research participants. In view of this, I seem did not encounter many difficulties in entering this research site. On one hand, I was treated by students as a part-time teacher as same as other full-time colleagues. On the other hand, in order to encourage students' free and honest expression of views towards things happening around them, I tried my best to build trust and establish rapport with them during and after the classes. This involved my sensitivity to asymmetrical power relationships operating in the setting between teachers and students and my readiness to provide assistance with their learning and non-academic matters.

Generally speaking, entry to students, teachers and the institution was not a problem when I was still treated as an insider by the whole community. Interestingly, student participants often demanded much less protection than I could offer. For instance, when I explained how confidentiality would be ensured and asked student participants to sign a consent form, some said that '*this doesn't seem to be necessary*' and some even said that they would not care whether their real names would appear in the study because it would only reveal information about 'their past'. In the whole research process, nonetheless, I kept reminding myself that I should not take advantage of their 'generosity'. I attempted to act as professionally as possible because this would result in students' free articulation of their personal response.

3.9 Credibility, Reliability and Validity

The establishment of research credibility is a critical issue in qualitative research. According to Davis (1995), credibility can be enhanced using specific procedures – that is, persistent observation involving a commitment of time to the research project in terms of duration and frequency. This objective was achieved in the current study.

The fieldwork for this study lasted for 13 weeks within one full academic semester, of which I consciously made use for informal conversations with students, and for observations of events happening around me in the research site. In this way, continuous observations and interviews and frequent contacts with the research participants helped me 'build trust with respondents, learn the culture, and test for misinformation introduced by both the researcher and the researched' (Davis 1995: 445).

The issue of research credibility is an issue of reliability and validity in a broader sense (Patton 1980; Lincoln & Guba 1984; Maxwell 1992). Nunan (1992: 62) suggests that measures for guarding against threats to reliability can be summarized in two words – 'care and explicitness'. He (ibid.) argues that 'if one is careful in the collection and analysis of one's data, and if one is explicit about the way the data were collected and analysed, then one can reasonably claim reliability and validity for one's investigation'. In sum, being careful and explicit with regard to data collection and analysis can generally enhance the reliability and validity of qualitative research.

The basic principle of 'care and explicitness' has played a guiding role in the research process of the current study in terms of the data collection and analysis. For example, I found that student participants often gave information and perspectives they perceived as salient and seemed to appreciate and value being asked about their views. In addition, they sometimes expressed a wish quite explicitly that my research would change certain 'unreasonable' things happening around them. In particular,

analysing students' views expressed in their interviews, I had a feeling that their views were sometimes inconsistent. For instance, they hoped to become more autonomous and active learners on the one and described their appreciation of the teacher's attentiveness to their language activity in class on the other.

In view of this seeming tension in students' perceptions and insights, I adhered to Nunan's (1992) rule of thumb of being as careful and explicit as possible in the short-term process of data collection and analysis. That is, I had almost automatically played an insider role, which was a given and thus unavoidable one. Such practice would help me tease out students' own views and the contextual influences on insider status and come up with more balanced and convincing data interpretations.

3.10 Limitations

There were two major limitations to the quality of this study. On the one hand, this study was carried out within a single-case institution only. The in-depth findings can only be applicable to other similar institutions. Another central limitation closely related to the data collection and analysis is the potential researcher bias, based on the status of an 'insider' researcher.

In accordance with Lincoln and Guba (1985), in addressing the issue of researcher bias in interpreting data, member checks (referring data and interpretations back to informants for verification), debriefing by peers (providing a systematic account of research experiences, findings and further decisions of some non-involved professional peers for the purposes of challenge and legitimation) and reflexive journals (keeping a journal to display the researcher's transformation in his mind, critical and philosophical positions and bases of decision-making) are three main ways of avoiding such a research bias as much as possible.

All three measures were taken in the current study whenever circumstances

allowed, although I was not able to refer all the interview transcripts back to all interviewees involved. In terms of 'member checks', I did manage to find some interviewees who were willing to check the transcripts, to hear my interpretations of relevant phenomena and to then provide honest feedback. On some other occasions, my doubts and possibly inaccurate interpretations regarding certain predominant issues gained from earlier interviews were solved or corrected by subsequent informal conversations and email exchanges with other students.

For instance, I was once quite puzzled about and held somewhat negative views to students' apparent 'silence' towards student-led forum, but continuous checking with students made me realize that students' concern and behaviour deserved more complex explanations. In this case, a large number of contacts with students in various forms seemed to play the role of 'member check' – that is, participants themselves helped verify certain issues that were important in their daily lives.

In terms of 'debriefing by peers', I was able to find several professional peers who had been my colleagues for many years and still treated me as an insider at the research site. I did not send any written texts to them because they often have a tight schedule, but my causal face-to-face and telephone conversations with them helped confirm or challenge some of my initial impressions and understandings of certain issues. Talks or stories shared with them could also help me revise my interview questions and gave me insights into certain complex issues regarding second language teaching and learning.

For example, before starting my interviews with students, I designed an interview guide consisting of parallel questions for students. I sent the guide to a few former colleagues who were equally familiar with the Putonghua programme for their feedback. Some responded that the guide as a whole was too structured and would limit the expression of ideas. When I had their comments, I had already conducted

several interviews using this guide and also agreed with their opinions. Feedback from my former colleagues gave me more confidence in changing the form of interviews and I quickly switched to more open and semi-structured interviews.

Finally, I kept a 'reflexive journal' throughout the entire research process, recording my own evolving understandings of the issues under investigation and reshaping further directions. In sum, I would like to assert that the use of the three measures suggested by Lincoln and Guba (1985) to avoid biased interpretations has played a confirming and challenging role throughout the entire research process.

3.11 Ethical Issues

As reflective comments on ethical issues, I also would like to mention below four points that emerged in my study. The first involves the researcher's position. In this study, students were accustomed the teacher-led culture and naturally expected their teachers to assume a leadership role in class, in spite of the introduction of technology. Following this line, no matter how hard I tried to engage students in co-interpreting their own discourses and actions that took place during the study, it was somewhat difficult to make this research entirely a collaborative model. Moreover, traditional Chinese Confucian values that emphasise respect for authority also further prevented student participants from challenging their teachers' beliefs and teaching experience, which is common in Western academia. Hence, the researcher must be aware and ensure that all participants must be allowed to show their expressions freely, and the wishes of those who do not want to participate must be respected.

Students' readiness to be interviewed in my case leads to the second issue – research culture. In the CPCE, since students were rarely invited to act as research participants, I found it relatively easy to find student interviewees, or it could be said that some students were comfortable to be interviewed. Another potential reason was

that they wanted their concerns and voices to be heard. Students did not seem to care about whether their views would be reported, although I repeatedly explained to them the measures taken to ensure their anonymity. Of course, I did not want to take advantage of their ‘generosity’ in giving information. Upon reflection, this is an advantage of conducting research in a low-profile community college where people tend to have ‘a simple and pure mind’ – words I have often heard from both students and teachers. I have been informed by friends working in top research-oriented universities that student informants are not very cooperative, as they have been asked to give their opinions too frequently. Fortunately, this was never a problem in my study.

The third issue relates to the centrality of research participants. All permission was obtained prior to making investigations. It was also imperative that the participants would be informed explicitly about the nature of the research in the beginning, including all personal biases and interests, so that to make sure that all participants had an equal access to information, creating an opportunity that could maximize the involvement for all participants.

The last issue concerns a number of ethical principles that I had to obey when conducting my research (O’Brien 2001; Winter 1987). First, I had to make sure that all individuals and groups have been consulted carefully and that the guidelines of the research are agreed before commencing the research. As such, I tended to disclose information to my student participants to let them know what the purpose of my study was and ask them if they were willing to participate. I would feel completely comfortable if they did not want to participate, and this absolutely did not affect their grades in the programme.

Furthermore, the research process must remain transparent and different suggestions and concerns from participants are allowed to raise. In order to achieve

such a purpose, regular meetings were thus imperative to ensure all opinions and views of participants are shared and involved, while the study moved towards its goals. I intended to have a two-hour meeting with my participants once per week. The date, time and venue of meetings were not constant due to participants' available schedule and were negotiated between the researcher and the participants.

Finally, the researcher has to ensure confidentiality of the research process, and know clearly about the nature of the research, so that to make sure that there is equal access to information for all participants. In the letter for inviting an interview (see Appendix A), for instance, I state clearly the purpose of conducting the study to all participants and promise that all information provided is treated confidentially.

3.12 Conclusion

This chapter discussed the research methodology, including the research design and research process adopted in this study. The aim of the study was to scrutinize the students' personal response to a technologically mediated Putonghua programme, by examining the perceptions and learning experiences of key student interviewees in their *CM* blended lessons and free-time through in-depth interviews, supported by the analysis of students' onsite activity. Along this line, in the following three chapters, Chapter 4 provides a baseline evaluation of the students' perceptions and views of language learning with technology before the introduction of the TLE. The students' response to the TLE in their *CM* blended lessons and free time is respectively scrutinized in Chapter 5 and 6. Each chapter addresses one research question.

Chapter 4 Learner Reflections about Learning Putonghua with Technology

4.1 Introduction

The starting point for the evaluation of the nature of the relationship between autonomy and technology begins with the learner: their observations and reflections about learning Putonghua and their experiences of learning with technology before the introduction of the TLE. The capture of this baseline information represents a rich source of comparative data for consideration alongside their subsequent response to the introduction of a technologically mediated Putonghua programme. This chapter addresses the first specific research question and is divided into two parts. Part one provides the students' reflections and perceptions about effective language learning and on their current learning environment. Part two scrutinizes the students' learning experiences with technology.

4.2 Students' reflections on their current learning environment

The notion of the classroom as 'the natural site for learning' (Benson 1997: 23) characterizes a traditional view of the guided learning model where the interaction to predominantly takes place between the novice student and expert teacher. The students in the study attributed some value to this approach. In the context of a TLE, where the boundaries are redefined, one might wonder about the impact of the learners' experiences of the guided learning model on their capacity for autonomous learner behavior. Observations about learning Putonghua in Hong Kong made by the students who appear in this study is of particular interest, because they had been learning Putonghua through a period of pedagogical transition from the traditional transmission approach towards the more communicative model.

Students in this study reported that there was little expectation or opportunity for them to make own choices about learning or to interact in the target language. They

acknowledged that it was the teacher who managed their language learning programme and from whom they sought expert direction and correction. They described a typical Putonghua lesson as one in which '*you just learn what the teacher says'* (Kai) and said that in '*most of the classes where I have been, the teachers just use the books and they read the instructions, do the exercise*' (Amy). These are comments that concur with Hawisher & Selfe's (2001: 55) view of 'traditional notions of education that permeate our culture…teachers talk, student listen; teacher's contribution are privileged, students respond in predictable teacher pleasing ways'.

For many students, speaking Putonghua was inaccessible beyond the classroom because, as Siu explained, '*my environment is totally native. I really don't have a big opportunity to practice my Putonghua*'. Furthermore, students were aware that their exposure to Putonghua was limited during the school day. They talked with regret about their limited opportunities for meaningful face-to-face interaction in Putonghua, identifying the classroom as their only target language community. '*We only have the classroom to practice and talk in Putonghua'* (Mark). Although they acknowledged that using Putonghua was important, there was some resistance to do so between learners: '*We have to talk in Putonghua in the class, because it's the only time we have to practice the Putonghua…but most of the time we are speaking Cantonese (laughs)…yeah, it's a shame*' (Zoe). Zoe's observation that the students' resistance is a 'shame' indicates that she sees this as a missed opportunity.

The students' target language community was the teacher-led classroom, a controlled environment where '*you just have to say…what the teacher wants to know*' (Simon), and the teacher had the ultimate sanction over what was said and how it was constructed. Yet one should not make assumptions about the individual's capacity for autonomous behavior within the structure of a guided classroom learning environment. The introduction of a TLE might stimulate students' potential for

autonomy in the classroom. Prior to introducing the TLE into these students' learning programme, how did they conceptualize an effective language learning? These insights in the next section serve as a baseline from which to contrast the students' engagement with Putonghua following the introduction of the TLE.

4.3 Students' Perceptions about Effective Language Learning

For these students, in the absence of real-world opportunities to use Putonghua extensively, they placed a high level of trust in those whom they considered to be linguistically better qualified than themselves, whether it was their teacher, a native speaker, a workbook or a computer. Previous learning experience informed their understanding about how they might learn from their mistakes, in which the teacher not only indicated but corrected linguistic errors. Simon liked the teacher '*to tell me if this is wrong or right*' , and felt that '*…if someone is correcting me with speaking, I will switch it and I will say "OK this is wrong, now let's deal with it*"'. The presence of the teacher correcting and providing answers to linguistic conundrums reassured Zoe who spoke warmly of being able to ask her teachers for help: '*the teachers…you can ask them about your doubts and worries…and they are always nice with you and they give you the correct answers*'.

While the students liked to be corrected, they did not consider this to be the only part of the learning process. There were indications that they felt they could learn from their mistakes. Yoko explained that for her, it was not just a question of the teacher providing her with the correct answer but that '*I need different strategies and I need a bit more time to try to understand a rule*'. In line with the constructivist perspective, Yoko was aware that she needed 'time and psychological space' (Little 2010: 9) to conceptualize and engage with the 'process and content of learning' (ibid.). These observations suggest a sense of responsibility on the part of the student

for their learning, indicating their capacity for autonomous behavior, but that this does not necessarily preclude the teacher. Vicky considered that '*the teacher is good because sometimes they correct your mistakes*', so that the teacher's linguistic expertise underpinned students' faith, and they willingly acquiesced to her superior knowledge. In the mind of these students, the teacher alleviated uncertainty and solved linguistic problems.

So what did the students report about classroom interaction and learning Putonghua in the guided learning environment? I look at this from three perspectives: students' views of the teacher-learner relationship in the guided learning classroom; students' reflections on patterns of peer interaction in Putonghua in the classroom and their reflections on the strengths and limitations of the guided learning model.

4.3.1 The guided learning view of the teacher-learner relationship

Prior to introducing the TLE, the students indicated in interview that the relationship between the teacher and students in the classroom influenced their use of Putonghua. They described their appreciation of the teacher's attentiveness to their language activity in class. For instance, Yoko reported that '*it's important, it's important that the teacher is how do you say…is…hanging on what the students are doing*'. Her comments resonate with Dickinson's (1997) observation that within the guided model the teacher maintains a degree of control over student interactions in the target language.

Yet tension was remained between teacher and learner as David described an experience when the teacher corrected his Putonghua '*…I am writing she came by me and she said, "That's bad and you need to change this" and I think that the teacher is paying your attention'*. David added that this made him feel that he was failing because *'it's supposed that I know to write in Putonghua but I make many errors and I*

don't like a lot'. The teacher's attention to linguistic accuracy raised David's awareness of the disparity between his teacher's linguistic knowledge compared with his own. Insights emerge into the dynamic between the teacher and the learner in the context of the guided learning model.

Although students attributed value to the expertise of the teacher, the classroom was defined by hierarchical and linguistic deference, overlooking the communicative function of language. This proved problematic for Carol because it left her little room for the expression of autonomous thought. She described how she felt intellectually stifled '*inside the classroom, you just have to say…what the teacher wants to know*'. Carol's frustration is an indication that she visualized language 'as a way of re-mediating one's interaction with the world' (Lantolf & Thorne 2006: 5) and that language development was more than a matter of acquiring and perfecting 'new signifiers' (ibid.). Linguistic indicators in the comment Carol makes indicate the level of control she perceived to be exercised by the teacher. Classroom use of Putonghua emerges more 'drill-like', eliminating a sense of linguistic freedom, rendering the language devoid of meaning, where conventions of classroom behavior were to '*sit and yes, say yes, yes to everything that the teacher says*' (Carol). Carol wanted the intellectual freedom to explore Putonghua autonomously rather than defer to choices made for her.

4.3.2 Patterns of peer interaction in Putonghua

Student observations suggest that their classroom was defined by notions of hierarchy and linguistic boundaries. It could be argued that this reflects pedagogical traditions in classrooms worldwide. Students reported that the language of the classroom was supposed to be Putonghua and several said that '*with the teacher it's always in Putonghua. But with our classmates it's not usually*' (Zoe). Vicky explained that she

spoke in Putonghua '*sometimes outside with the teachers, but in my case, most of the time only in the classroom*'. Vicky's comments suggest the frequency with which the target language was used even with the teacher, and the extent to which she identified using Putonghua with the classroom.

Interactions in Putonghua were guided by the teacher and predominantly limited to the classroom, but the students showed a resistance to using Putonghua with their peers: '*your friends…well if you talk with them in Putonghua, they will say you are crazy because you can talk with them in Cantonese*' (Kai). Siu who was a shy student was fearful that if he spoke Putonghua in open class his peers would tease him: '*I think that if I could make a mistake, everybody is going to laugh at me, and I don't like*'. Putonghua emerges as the working language of the classroom as determined and encouraged by the teacher, with the students driving the use of Cantonese between peers. Yet the default use of Cantonese was not welcomed by all the students: '*I like speaking Putonghua but when my partner or classmates speak in Cantonese so I…well, I have to answer in Cantonese*' (Mark). Mark's feelings were reiterated by Amy who felt that the students should practice speaking more Putonghua: '*I just recommend especially just trying to practice and practice, there's no need using Cantonese*'.

Furthermore, students reported that the balance of use of Putonghua was weighted in favor of the teacher inhibiting students' potential capacity to exercise control over their learning. For example, Simon described that '*The teacher talks and talks and the teacher don't give the opportunity for the students to talk and I think that you, as a teacher, you are supposed fluent in Putonghua, so you have to give the opportunity to your students to practice as much as possible'*. Excessive teacher talking time in the classroom reduced already limited opportunities for students to use Putonghua. Amy provided an insight into the effects of excessive teacher talking time

on student interactivity in Putonghua: '*In fact there are no dynamics, just sit down and listen and listen. I mean you don't do anything*'. Hence, in a context where the students only have the classroom to practice and talk in Putonghua, the extent to which they felt able to think and act in the target language was significantly reduced by the norms of classroom behavior and the conventions of the education system. In the Kessler's (2009) and Kitade's (2008) studies it was found that online environments provided a stimulus that encouraged peer collaboration, so that for these students introducing the TLE might reconfigure the communicative dynamic and 'totality of relationships' (van Lier 2004: 3) between class members.

4.3.3 Students' reflections on the strengths and limitations of the guided learning model

The students in this study expressed a diverse range of opinions about the degree of expert-led direction required, yet they valued the structure of the guided learning classroom. In their mind, the teacher alleviated uncertainty and solved linguistic problems. For instance, in spite of Amy's enthusiasm to '*practice and practice*', she liked teacher nearby '*to tell me if this is wrong or right or how can you make it better…Yeah! It's like showing you, you know, is this OK or not*'. Although David explained that his teacher's attention to linguistic accuracy made him feel inadequate, in the next breath he reported that he felt meaningful learning through more formal input was better when provided by the Putonghua teacher particularly with '*your grammar…I think you need a teacher there'*. For David the context for meaningful language learning was characterized by the presence and input of the teacher, even though this had had the effect of making him feel linguistically inadequate.

Similarly Carol, who was resistant to saying what the teacher wanted to hear, was happy with the traditional status quo of the classroom where the teacher

alleviated students' personal responsibility to seek answers to linguistic challenges: '*The teacher is good because sometimes they correct your mistakes'*. The value these students attributed to the presence of their teacher corroborates the view that they are not masters of the language they seek to acquire, so need a teacher (Esch 1996).

Yet Carol also understands the limitations of the guided model in terms of language use. She willingly discards her own understanding about language learned in the classroom for the hard currency of vocabulary that '*you won't learn in groups*' in the formal classroom environment: '*I need to learn new vocabulary and there are some words you won't learn in the groups…With native speakers you learn slangs, idioms phrasal verbs and things like that, and you know it's good because you know that their mother tongue is Putonghua*'. Carol's observations indicate that the students conceptualized the value of teacher-led classroom learning as the context for meaningful learning, yet this is offset by an awareness of the communicatively restrictive nature of this environment. In other words, although these students valued direction, their reflections on their own experience of language learning suggest that they also sought autonomy within the parameters of this structure.

These students acknowledge that the inherent characteristic of their classroom were linguistically challenging on two levels. First, they understood that guided classroom learning made it difficult to reach a level of communicative proficiency where they could interact meaningfully in Putonghua. The perceived limitations of the guided learning environment become clear as Vicky described her first experience talking to a group of native speakers: '*I didn't realize I could communicate with them. They understood me and I understood them*'. Secondly, the students wanted to be able to reproduce the language effectively so that they might '*be as good as the native speakers*' (Amy). Embracing the opportunity for authentic mother tongue practice in Putonghua was highly prized.

Closer analysis of the students' reflections about their learning Putonghua experiences reveals a tension between the strengths and limitations of their learning experiences within a guided learning environment. They acquiesce to the teacher's expertise in the transmission of linguistic knowledge, but as language learners they are aware that the acquisition of linguistic knowledge is just one half of the equation. These students indicated a resistance to the guided learning model when it proved communicatively restrictive, yet the ultimate aim is to support the learner towards an ability to use the target language with confidence and spontaneously (Arnold & Ducate 2006).

4.4 Students' Learning Experiences with Technology

One of the characteristics to emerge as students reflected on their learning experiences in the guided learning classroom was their faith in the representation of knowledge by the voice of an acknowledged expert, whether this was the teacher or native speaker. In the absence of a teacher or native speaker, students might turn to the computer as an alternative for solving linguistic problems: '*there is no teacher nearby, I find an internet structure and I find other things. I see the structure and I check it*' (Mark). Given the limitations of the timetable where the '*teachers dedicate to teaching in Putonghua, maybe one hour to three hours a week*' (Amy), the students identified the computer as a viable alternative to the guidance offered in class. Furthermore, the computer was on tap 24 hours a day: '*If I'm having a doubt and I'm online 24 hours a day and I'm having my laptop in there, and I say "Oh this word…what's this word, what does this word mean?" And I go and that's it, you're done*' (David).

Zoe conceptualized the computer as a high-tech form of expert error correction which helped her to improve her writing: '*When I'm writing sometimes the computer corrects my mistakes and I realize that I'm wrong…if I write with a pen, it's more*

difficult if I make a mistake'. In short, Zoe was happy to exploit the functionality of the computer to produce linguistically accurate Putonghua, but made no mention of reflecting upon, or learning from, her errors. This sentiment was replicated by Simon who acknowledged that writing in Putonghua was difficult for him: '*I don't like writing because I know that I have a lot of grammar mistakes*'. Technological error correction solved this for him: '*Right now we have a lot of software that can help you to correct your mistakes and that's really nice and I love those software*'! These students' thought about technology apparently were task-based and engagement limited to interactions between the student and the computer. Neither the technology nor the language were conceptualized as part of the environment within which both exist (see Figure 4.1).

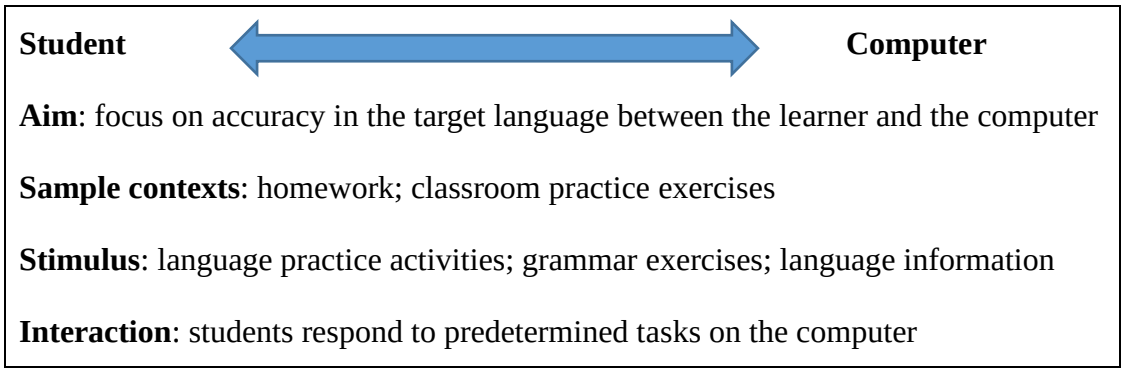

Figure 4.1 Task-based interaction between the learner and the computer

Technology has conventionally lent itself to self-access beyond the classroom, with the computer as an 'electronic workbook' (Kern & Warschauer 2000: 13). In the study, self-report data collected from interviews substantiated the view that technology can be an effective means of encouraging learner autonomy because students can make choices and assume increasing levels of responsibility for their learning. For example, Kai described that '*In the internet you can find a lot of*

exercises about every topic in Putonghua what you like. And you could download the exercise and do it'. Kai's observations reflect a view of the 'computer-as-tutor' (Crook 1994: 79) and run parallel to Dickinson's (2000) notion of principled learning, represented by exercises with a focus on accuracy and detail, rather than fluency and meaning.

Despite the students' little opportunity in the classroom engaging communicatively in Putonghua but they had exploited the communicative potential of the computer using the target language with friends beyond the classroom. For instance, David mentioned that he was in regular synchronous and asynchronous correspondence with some friends from Taiwan and Mainland China. He described that '*because it [Putonghua] is the only way we can talk because they can't speak Cantonese*'. David exploited technology to use Putonghua communicatively and independently of the classroom, a model suggested in Figure 4.2.

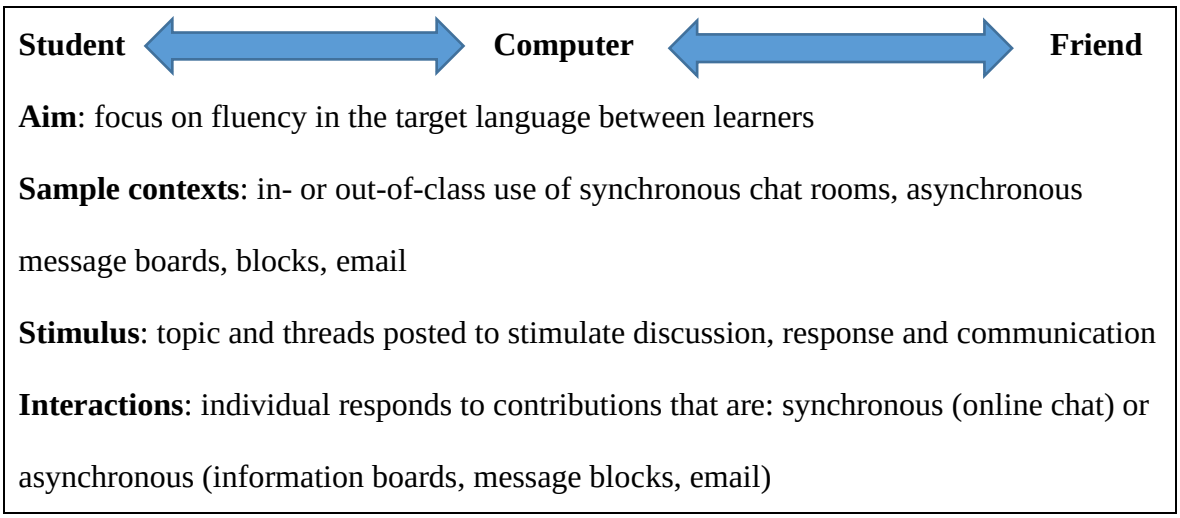

Figure 4.2 Communicative interaction mediated through the computer not face-to-face

David chatted online to friends from Taiwan and Mainland China, seeing this as an opportunity to practice and rehearse the language taught in class in a meaningful

context, experiencing online linguistic freedom under the expert eye of the native speaker. Significantly, David identified the potential relationship between technology and teaching and learning in Putonghua: '*Computer is a medium to be communicating with more people, to communicate your ideas, and so to teach and learn*'.

Like his classmates, Yoko identified with the guided learning approach with technology as an 'electronic workbook' (Kern & Warschauer 2000: 13), keenly following up recommendations by her teacher and visiting Putonghua websites. When asked whether she did anything autonomously of the classroom to support her language development, Yoko described one major autonomous learning strategy, distinct from the guided tradition of the classroom. That was her participation in Putonghua-speaking chat rooms: *'I like chatting…it's the rule of the channel, you only have to speak, it's writing, but 'speak' in Putonghua…every day for two hours, three hours, it depends if I got lots of work, homework'*. Yoko describes having to 'speak' in Putonghua before clarifying that she meant 'writing', suggesting that she was able to use Putonghua online. Yoko specially chose a chat room where the 'rule' was to use Putonghua, looking beyond the limitations of the classroom where her peers resisted using Putonghua.

These students exploited technology to achieve increased communicative and learner autonomy, going beyond the principled tradition of their classroom. Their personal reflections about language learning and their use of technology suggests that autonomous learner and language behavior is likely to depend on creating the right conditions where autonomy can thrive, but it is also necessary to 'understand these opportunities and integrate them where they are pedagogically relevant' (Dillenbourg et al. 2002: 12) with a transparency of purpose.

4.5 Summary: Potential for Autonomy in the Classroom

According to Hole (1981), there should be a structure within which the learner might exercise his potential capacity for autonomy, but for these students it seemed that the conventions of the classroom suppressed opportunities for autonomy. Conventions of classroom behavior were further intensified by the dynamic between the teacher and the more confident students who overwhelmed the less confident. Student were fearful that the more confident student would tease them for making mistakes. A paradoxical sense of opportunity and challenge emerges for these students in seeking to achieve increased levels of linguistic and learner autonomy within the boundaries of their target language community – the classroom.

For these students, their perceptions about language learning Putonghua before introducing the TLE suggests that they were compliant, had respect for authority and conformed to the traditional pedagogical structure of the classroom. But caution should be reminded in drawing assumptions about their potential for autonomy in the classroom. On the one hand, the students found it difficult to see the value of the classes where learners were not encouraged to take more responsibility for their own learning. These learners, therefore, demonstrated their potential for autonomy in Putonghua beyond the classroom. The conventions of the classroom environment overwhelmed their confidence and innate capacity for self-expression in Putonghua. On the other hand, before the introduction of the TLE, the students indicated that they predominantly conceptualized language learning with technology in terms of functionality and that online interaction with Taiwan and Chinese friends was not real language learning. As the students reflected on their experiences learning Putonghua before the introduction of the TLE, there were indications to suggest their potential capacity for autonomy within the framework of the guided learning classroom, summarized in Table 4.1.

Table 4.1 Summary of student perspectives on their learning environment before introducing *CM*

Guided learning approach	**Positive student perceptions**	**Negative student perceptions**	**Students would like**	**Emergent pedagogical challenge**
Classroom Focus on accuracy; task completion; error correction	Expert presence; guidance; purposeful; clearly defined aims	Communicatively restrictive; inauthentic use of language; overly task-led; resistance to using the target language	Fewer directed language production tasks; extended focus on fluency & communication; increased personal responsibility for learning	Creating conditions for increased autonomous behavior and classroom interaction in the target language; provision of materials and content to stimulate interaction in the target language
Online Grammar; Writing; Pronunciation;	Expert knowledge; expert support;	Attention to micro-linguistic detail; inauthentic use of language; task-led;	Increased opportunity for meaningful interaction in the	Harnessing ‘out-of-class’ online communicative

Speaking; language practice exercises	learning from mistakes; focus on form	de-contextualized; non-communicative	target language for fluency: self-expression; ideas and thoughts; discussion; social interaction	energy in the target language; creating a meaningful context for access in class and at home

4.6 Conclusion

Like language learners worldwide, the challenge for these learners was in making the conceptual transition from being language *learners* to autonomous language *users*. Whether in the classroom or with technology per se, they were informed by an expert-led approach to language learning that was driven by the need to achieve accuracy over fluency, the written word over communicative use of language, deferring to the hierarchy and boundaries of language determined by the voice of authority. Language learners in classrooms around the world have limited opportunities to engage in meaningful face-to-face interaction in the target language. The classroom represents their only target language community, language use is thus functional. The students in the study attributed value to the support and purposefulness of the guided approach, despite the constraints imposed upon them by pedagogical convention. As Benson (2009: 25) suggests, ‘it is not primarily an individual’s lack of autonomy, but the suppression of their autonomy by educational systems that is the problem’.

CM introduced new and unfamiliar spaces and an alternative dynamic to reconfigure the dimensions of the learning environment in the classroom as well as

online access in their free time. Mindful of the students' language learning experience, two issues emerge, which considered together informs the subsequent discussion in the chapters that follow about the nature of the relationship between autonomy and technology. The first issue is the perceived value students attributed to the TLE and whether they conceptualized the *CM* platform as a means by which they might be capable of expressing their capacity to be autonomous learners and users of Putonghua. The second issue is whether the value student attributed to the technology was corroborated by their use of the *CM* platform.

Chapter 5 Perceptions & Reality I:

Students' Response in *CM* Blended Lessons

5.1 Introduction

In this chapter I look at the students' response to *CM* in their blended lessons. By examining the perceived value students attributed to the *CM* platform and discussing whether the value was corroborated by their use of the platform, I attempt to see what this might reveal in terms of gaining insights into the nature of the relationship between autonomy and technology in the context of language learning. The students' personal response to *CM* could be captured from interview data, as well as the examination of onsite activity data in the form of site records and student writing. Other than interview data, the nature of oral interaction makes it difficult to capture instances of autonomy in the classroom. Students' writing assignments and forum posts resulting from *CM* lessons has therefore been scrutinized to see whether this captures the essence of their use of Putonghua in the blended lessons.

The chapter begins with the students' reflections on *CM* lessons. The students' patterns of use of Putonghua in *CM* lessons; their reasons for using Putonghua in *CM* lessons and their perceived value of the *CM* as an effective technological platform are respectively provided. These discussions present the perceived value students attributed to the TLE and attempt to see whether students conceptualized the platform as a means by which they might be capable of expressing their capacity to be autonomous learners. The chapter then gives an evaluation of students' writings, reflecting whether the value students attributed to the technology was corroborated by their use of the platform. It concludes with the summary of the capacity for autonomy within the *CM* classroom, in which the notion of autonomy and relevant instances of autonomy are further indicated clearly.

5.2 Student reflections on *CM* lessons

CM lessons provided learners with extensive freedoms and increased responsibility. TLE access was mediated through the internet. Students took responsibility for following the *CM* lessons and managing the freedom of the internet in class. The first one of the students' reflections on *CM* lessons is the room layout. As mentioned in section 3.4.1, two sessions were arranged in the *CM* lessons. In the first session the teacher ran and controlled the lesson in the classroom; internet access was only mediated through the teacher's laptop with a projector. In the second session students moved to the computer room in which they were allowed to have their own individual computers. As mentioned in section 3.6.2, the students seemed to become more active in the second session: in the computer room, the terminals were positioned in rows facing the front of the room, saving the shy students their blushes '*because you are not face to face with the others*' (Kai), encouraging more equal levels of participation. Amy liked the idea that her classmates were distracted by the technology by '*just watching the screen*'. In the classroom there were no such distractions and '*everyone is paying attention to you*' (Zoe). The value of *CM* lessons extended beyond notions of autonomy manifested by external technological control. Suggestions of autonomy in the *CM* classroom seems less of a response per se to the technology, but more to the change in dynamic and the interconnectedness between learners created by the technology, making them feel capable of critically engaging with learning as a 'participant in a social milieu' (Esch 2009: 33).

The second one of the students' reflections on *CM* lessons is a perceived sense of freedom. Access to individual screens stimulated the range of language skills, with the freedom to choose and make decisions about how they might exploit technological functionality to support their learning. They thought *CM* lessons gave them more time and opportunity to discuss and share ideas, because '*we not always have the time to*

talk plus to express our ideas' (Simon). Simon felt encouraged to participate, getting ideas from his classmates, the technology facilitated the freedom to 'get information' to support his contribution. Simon's observations suggest the possibility of an ecological view of autonomy as he conceptualizes the relationship between elements of the TLE experience as a web of interconnectedness where individuals cognitively engage with one another.

Yoko valued the freedom of having her own terminal, stating that '*for me it's easy to be free*'. She wanted to make independent choices about learning and she felt capable of technologically multitasking between the screen and the lessons. In the traditional classroom, the pace and nature of the interactions between learners were determined by the teacher, which Yoko identified as a hindrance to self-determination because '*when the teacher asks the questions, you think, "Well I need to think about by myself instead of with my classmates"…If unfortunately I don't know the answer, you just cannot do it*'. Yoko considered the process of learning to be a participative exchange between class members, but with the teacher, the experience became '*passive, just passive, everything is passive. The teacher is talking and talking and nobody's listening*'. Yoko's concerns mirror a more transmissive approach to language teaching and the view of the passive learner within the expert-novice framework, where 'control and power resides primarily in the teacher' (Lantolf & Thorne 2006: 274).

The third one of the students' reflections on *CM* lessons is in terms of learning outcomes. Some students considered that working from individual computers made it easier to mediate the transition between language skills during the *CM* lesson. David further valued the sense that *CM* lessons focused the students' attention because they felt encouraged to '*share ideas…you are in front of the computers and pay more attention*'. He explained the value of having his own screen in facilitating the

opportunity for technologically multitasking, taking and saving his notes from the computer lessons directly to his memory stick. David's response to his learning environment as he exploited the functionality of the technology suggests both the potential for learner autonomy and the flexibility of students in adapting to 'different learning conditions…by conceptualizing their learning experience' (Esch 2006: 36). Technology seems has the potential to stimulate students' cognitive and metacognitive language learning strategies, thereby supporting the construction of knowledge.

5.3 Patterns of Use of Putonghua in *CM* Lessons

I hoped to identify differences between the students' use of Putonghua in the classroom compared with *CM* lessons to see whether they showed signs of interacting with one another more freely and spontaneously in Putonghua in response to the *CM* lessons. It is thus necessary to understand the students' patterns of using Putonghua in *CM* lessons. The language of the *CM* was Putonghua, so it would be usual for students to use Putonghua around the platform. In an interview question students were asked under what conditions they would use Cantonese on *CM*. Examination of the students' replies in Table 5.1 suggests that they interpreted the question with a multiple of reasons.

Table 5.1 Interview question - under what circumstances would you use Cantonese on *CM*?

Vocabulary	**Understanding and being understood**	**Pedagogy**	**No circumstances (four students)**
● To say a word	● To clarify	● When it is	● There is not

that only exist in Cantonese. ● To teach some colloquial expressions. ● To contrast or compare some words or phrases. ● When contrasting different words with same meaning. ● If I need to explain something really important. ● To share cultural things.	about something that I don't understand. ● Just when I didn't understand something. ● If my classmates misunderstand what I said in Putonghua. ● If the other person does not understand me. ● Probably if I don't know how to say a word.	relevant for the topic. ● If it's required.	any. ● None. ● I did not think about it. ● No response.

For example, Vicky explained that she used Cantonese when '*I didn't understand a word then, yes…so someone explain me and that's it*', which suggests that she used Cantonese for emergencies. However, more students reported that, unlike the classroom, in the *CM* lesson they preferred to use Putonghua. '*It's Putonghua, in that [CM] lesson it's Putonghua'* (Yoko). Hence, interview data in Table 5.1 suggests that students identified Putonghua as the language of choice in the *CM* blended environment, unlike the classroom where use of Putonghua was largely directed by and to the teacher.

Students reported increased levels of class-wide interaction in Putonghua throughout the *CM* lessons. Changes in patterns of language behavior are illustrated in the following extract from an interview with Zoe and Carol:

Researcher: What's the language of this environment [CM lessons]?

Zoe: Putonghua.

Researcher: With teacher and students it's…

Zoe and Carol (in unison): Putonghua!

Researcher: Students and students…

Zoe and Carol (in unison): Putonghua!

It is evident that students reported that in *CM* lessons they used Putonghua more extensively, although this is not to say they necessarily perceived the platform to be of pedagogical value. They were asked how they felt that *CM* supported their language development. Its value was predominantly identified as supporting the development of their writing skills, which significantly students linked to increased peer interaction in Putonghua and an alternative classroom dynamic in *CM* lessons. From the student perspective components of *CM* lessons came together, supporting Bronfenbrenner's

(2003: 22) notion of 'linkages' between environmental settings:

> *I have one version about that topic, but when I share about that information, I notice that my classmates have other perspectives, other points of view about that perspective and I try to gather all the point of view about that…I listen to them to get just one idea to write. (Kai)*

We can only infer that *CM* discussions were conducted in Putonghua, but the volume of student writing produced in response to *CM* lessons in section 5.6 corroborates the value students attributed to the *CM* experience and their engagement with the lesson. Before doing that, the students' reasons for using Putonghua in *CM* lessons should be discussed.

5.4 Students' Reasons for Using Putonghua in *CM* Lessons

Students reflected on their use of Putonghua in *CM* lessons compared with the traditional classroom. Three main reasons emerged to suggest why they felt able to use Putonghua more freely in their *CM* lessons.

5.4.1 CM facilitates an exchange of ideas and opinions in Putonghua

Students considered that the materials, design and structure of the *CM* encouraged the expression of independent ideas and opinions. In their semi-structured interview, students responded that discussion in Putonghua helped them to develop their own ideas and think of what to say, suggesting cognitive and metacognitive strategies. For instance, Simon said that '*You can express your own ideas and in the course book you are giving the answer that the book requires*'. Simon valued the notion of being an 'active agent' (Benson & Voller 2007: 7) in his learning, contributing ideas of his

choice in Putonghua. It is unclear whether Simon's interactions in Putonghua extended beyond the teacher to include his peers. But Vicky felt that they had the opportunity to '*always speaking Putonghua and it's like a debate of the topics for this course*'. Her description of *CM* lessons as being 'like a debate' suggests increased levels of peer interaction in Putonghua.

Contribution to classroom debates necessitates listening (implicit interaction) and speaking (explicit interaction), generating 'the seeds of autonomy and individualization' (Allwright 2008: 36). Mark contrasts using Putonghua in the classroom with *CM* lessons and a sense of intellectual and discursive engagement between peers emerges:

> *The teacher gives us the instruction and we complete the exercise and here it's different because it's like a question and all the class have to discuss it and give their own point of view…It's more interactive.*

Mark's comment describes increased peer interaction in Putonghua mediated by the technology. Yoko's belief that *CM* lessons were '*the only time that we have to speak Putonghua*' indicates that in *CM* lessons learners felt they had more 'time and psychological space' (Little 2000: 9) to communicate in Putonghua which serves as an interesting contrast with Siu's description of Putonghua in class being '*academic, not something natural like speaking*'. Interview data thus suggests that the introduction of the *CM* created conditions which stimulated an alternative dynamic, satisfying students' concerns about interaction in Putonghua. From an ecological perspective, and the notion of everything being related to everything else (van Lier 2004), it could be argued that students cognitively engaged with the web of social interaction in class, reacting to the direction suggested by the activity.

5.4.2 CM provides a meaningful reason for interaction

Kai thought that the *CM* lessons was '*personal, you're sharing your own idea*'. For him, *CM* lessons went beyond controlled practice activities, providing a purpose and '*something to talk about*' in Putonghua where there were no right or wrong answers: '*It's different because…you're having something to talk about, you're having a purpose of doing an activity…but when we are in class: "Alright, ask your partner about this", and then that's it, it's over*'. In other words, by design the discursive nature of the *CM* lessons meant that outcomes were uncertain and the direction of the interaction was determined by the voices of those who contributed.

Kai's view was reiterated by David and Amy who explained that typically in class they spent five minutes on the activity before gossiping in Cantonese. David explained that *CM* lessons were cognitively more challenging because they required '*more thinking about the topic of discussion, about the topic, to talk about it*'. The debate of *CM* lessons provided 'the opportunity to use the target language freely and spontaneously without conscious awareness' (Lantolf 2003: 367), challenging students' concerns about the communicative limitations of the classroom. In this sense, for these students *CM* activities had a pedagogical relevance (Dillenbourg et al. 2002), echoing the constructivist notion that 'effective learning begins from the learners' active participation in the processes of learning' (Benson 2001: 36).

5.4.3 CM provides topics 'that has to do with us'

In interview many students repeatedly referred to the idea that *CM* topics were interesting, relevant and created the conditions that encouraged them to contribute in Putonghua '*because the topics are very interesting, so I feel motivated to speak*' (Zoe). The connection between topic and peer interaction in *CM* lessons was echoed by

Carol who said the topics gave her a greater sense of commitment to the lesson: '*If I'm interested then I will do it happily and I will take more of my time that I have to do it*', a view suggesting self-regulation, decision-making and evaluation of the lesson. Carol's selection of the adverb 'happily' suggests that she did not necessarily feel the need to take up more of her time, implying an element of choice and intrinsic to the idea of autonomy in *CM* lessons.

Yoko found that self-expression easier when the topics had meaning for her: '*You can express…something if you have that experience you can express it, there are some topics…that take you a little bit longer…if it's politics, then it will be difficult, but if it's something that I am interested in then it will be easier*'. When asked in which context she found it easiest to express herself in Putonghua, Amy replied, '*Probably CM because of the topic*' rather than in the classroom. Furthermore Simon considered that in the classroom '*we are not very…like very related to the topic*', a view echoed by Mark who reflected that '*in classroom it's different because they're different topics…and you don't know anything about it*'.

The potential for meaningful choice is constrained if learners are asked to contribute to a discussion in the target language on a topic about which they have no life experience. Limited experience makes gathering ideas and subsequent articulation in the target language challenging. The TLE introduced a *CM* platform delivering affordances designed to generate 'thoughtful communication' (Kol & Schcolnik 2008: 52). Students also agreed that the topics for discussion in *CM* lessons were meaningful, thus stimulating the construction and exchange of ideas in Putonghua. It could be argued that the introduction of the *CM* altered the classroom dynamic, influencing the sense in which students felt capable of conveying their own opinion, responding to the fluidity and unpredictability of others' views.

5.5 Students' perceived value of the *CM* platform

Most students saw similarities between *CM* and a course book. However, unlike a course book, the *CM* introduced flexibility to the classroom, with the freedom not only to navigate around the site but also the opportunity to look further to the internet. Students valued having the responsibility of *CM*-mediated access to the internet and the interconnectedness between elements, suggestive of the ecological notion of the 'totality of relationship' (van Lier 2004: 3) through the TLE, which was perceived to add values to *CM* lessons.

Simon described the value he attributed to interactivity and links between *CM* lesson and the internet. He considered this dimension to be the defining characteristic of *CM* because '*it's interactive. The course books I think are some papers, some pictures, but with CM you can read these papers and pictures in relation to other pages'*. As Zoe said, '*It is useful that we have the information available and it's a very credible'*. Hyperlinks enabled interactivity for learners between *CM* resources, providing additional resources and information related to the lesson. '*The links on the pages to where there are the meaningful words in relation to our life experience. I think it's interesting because with a course book we can't do it*' (Amy).

Students also described that they did not feel constrained by the predetermined content of the page in *CM* lessons. '*You can be limited with the course book but you can be available many sources with the internet*' (Kai). Interaction in *CM* lessons was described as more '*dynamic…not flat*' (Carol). Access and interconnectedness between the lesson and global resources enhanced the dimensions of the learning experience. Siu believed that internet access enhanced the *CM* lesson, transforming class discussions. The students saw the value of the functionality and interactivity of the technology liberating them and their teacher from external constraints, rendering the potential of the platform to be greater than the sum of the component parts of each

lesson. The notion of interconnectedness emerges. This would suggest that the learners' response to *CM* lessons was more than a matter of content and design, but rather it was the 'totality of relationships' (ibid.) and synergy created by the interaction between class members and their use of the technology, with the potential to stimulate instances of autonomy. The suggestion of an ecological version of autonomy emerges, in which internal-cognitive responses are anchored by the task, mediated by the technology and transformed by the unpredictable web of social interaction.

The self-report data is compelling but in isolation it is insufficient. I was aware that the students' extensive perceptions of using Putonghua in their *CM* lessons may have been a response to my presence in interview, so these data needs to be scrutinized by comparing them with the students' written work. In seeking to redress this I scrutinized students' post-lesson assignments and forum posts to corroborate the perceived value students attributed to the TLE in their *CM* lessons.

5.6 Evaluation of Students' Written Work

The value of speaking was widely acknowledged by the class, they reported that they needed to speak more Putonghua in class and speaking was identified as essential for language development. One of the aims of *CM* lessons was to create conditions in which students could interact more freely in Putonghua. Nevertheless when asked which *CM* activities were more helpful in terms of language improvement, many students selected writing in the TLE. Students perceived writing to be of greater pedagogical value in *CM* lessons than speaking. Yet significantly students said that classroom discussions helped them collect their thoughts when writing posts and assignments:

Kai: I have one version about that topic, but when I share about that information, I notice that my classmates have other perspectives, other points of view about that perspective and I try to gather all the point of view about that…I listen to them to get just one idea to write.

Vicky: You're having something to talk about; you're having a purpose of doing an activity because you know that you need to write a report…or something like that.

Examination of evidence in the form of the students' written work might therefore offer insights or 'linkages where each system has its own patterns of operations and relations but are simultaneously linked' (Bronfenbrenner 2003: 22).

5.6.1 Recurring themes following classroom discussions

Recurring themes in student writing may reflect aspects of classroom discussions. Students referred in their written work to the views expressed by others in class:

'I could see the most of my classmates agree' (Mark – assignment)

'I agree with my classmates' (Amy – post)

'I agree with Zoe' (Carol – post)

It cannot be ascertained whether class discussions were in Putonghua. It is difficult to determine how much Putonghua was spoken in *CM*-mediated lessons, but the volume of posts and assignments illustrate how much Putonghua was written in response to *CM* lessons. It could be argued that the volume and content of the written work encouraged students to write and that their writing mirrored the turn of classroom events. Posts and assignments were examined for recurring themes using two

selection criteria: 1) Lessons referred to most often in interview. 2) Lessons which stimulated significant written output.

David explained that he took notes during classroom discussions directly onto his computer because it helped with his homework. Many students also made explicit reference to *lesson 7 Texting* which was a lesson on the effects of texting on language. David's writing might therefore capture the topics alluded to in the classroom discussion from lesson 7. In David's assignment, for example, he introduced one theme – *texting and context: 'we have to know when to use it and with whom'*, which correspond to the theme that recurred most often in his classmates' assignments and posts.

In interview Amy reflected on lesson 7 and told me the story of her boyfriend using text language in his homework. '*I noticed he was texting his assignment and I said, "Why did you do that? You need to write in a formal way"*'. Her anecdotes reflects the theme of appropriate use and context for text language which appeared in 9 posts and 9 assignments. Simon described the lesson as being about '*texting and why we can't use about that*', suggesting the way in which the topic was transformed by the students as it evolved cognitively between class members, from the detrimental effects of texting to rules about using text language, the idea emerged in others' writings (see Table 5.2).

Table 5.2 Recurring themes – texting and context

Assignment	**Post**
● Teacher will never allow it and students know it. (Zoe) ● I don't do texting to my teachers.	● Not to communicate in formal situations like teachers, firms. (Vicky)

(Siu) ● Only important things is to notice where and when I should use it. (Amy) ● Not to communicate in formal situation. (Simon) ● People must be know that the way the usually write when texting someone and that it isn't the correct way of writing. (David) ● Almost everybody write in this way in some moment, and write in a formal way when we are writing an essay, an article or other academic way. (Kai) ● People are used to writing in this very informal way and when they have to write in a formal way, they don't know how to do it. (Vicky) ● I think it is appropriate between friends. (Carol)	● I think that people are aware when they should write or text. (Yoko) ● Texting to my teachers is not polite. (Mark) ● Don't use it at school or other places or situations. (David) ● I think that teachers should pay more attention, students will become more familiar with this type of 'communication' and they won't be worried about the correct spelling of the words. (Carol) ● It is an informal way which we all have used. (Amy) ● We are not going to write an essay or a formal letter in that way! (Kai)

5.6.2 Writing as a reflection of engagement in class

One might argue that thematic analysis of student written work not only captures the relationship between classroom discussions and student writing, but that it reflects the

individual's level of engagement with *CM* lessons, corroborating the value the students attribute to the TLE experience. Zoe explained that when she was less interested, her attitude to writing changed. '*I do it, but I do it because it's a homework, but not because I enjoy it*'. Zoe's explanation reveals how she differentiated between duty and choice, reminiscent of the view that freedom is relative and more a matter of whether the individual is a victim of constraint (Trebbi 2008).

The pieces of writing produced by Simon in response to *lesson 8 Heroes and Icons* and *13 Class and Society* were different in length. When asked the reason for this, he replied, '*Heroes was more interesting, that's why*!' Simon's level of cognitive engagement with the lesson on Heroes and Icons was apparent in his writing, with indication that suggested that his interpretation of the assignment task had been informed by the classroom discussion because parallel themes emerged in his classmates' writing. Kai highly valued Simon's contribution to the classroom discussion in lesson 8. It influenced the way in which he approached his own assignment: '*I remember in the classroom, Simon say that "My hero is my mother" and also I think that my mother is my hero*'. Kai's approach to the assignment after lesson 8 suggests that he engaged with the contributions made by his peers to the lesson, the 'totality of relationships' (van Lier 2004: 3) and 'linkages' (Bronfenbrenner 2003: 22) between technologically mediated stimuli generating the classroom discussion and the subsequent choices Kai made in planning his assignment.

By contrast Vicky selected lesson 13 as her favorite lesson. She valued 'linkages' (ibid.) between the post-lesson assignment and forum activity where she could express her views. She produced an extensive assignment as well as generating and posting a thread for the forum. Interest in the topic and the class discussion may have stimulated Vicky's enthusiasm for writing. However, her response to the forum in

lesson 9 How do you relieve stress? was more perfunctory than her written work following lesson 13. The thinking and work contributed by Simon, Kai and Vicky supports the self-report data and the perceptions that the value of *CM* lessons lay in the classroom discussion, anchored by the task and mediated by the technology.

Class discussions stimulated the development of their writing skills. Students reported that *CM* lessons encouraged peer interaction in the target language through the exchange of ideas, providing a meaningful reason to use Putonghua in relation to topics that were of interest to them which they followed up in their writing. Each component of their personal response to *CM* lessons was distinct, yet linked, such that 'everything was connected to everything else' (Lantolf 2000: 25).

5.7 Summary: Capacity for Autonomy in *CM* Lessons

In this chapter I contrast student perceptions of the value they attributed to the platform with the reality of their online activity in the classroom to see what this might reveal in terms of gaining insights into the nature of the relationship between autonomy and technology in the context of language learning. Table 5.3 summarizes the notion of autonomy and relevant instances of autonomy in the context of the *CM* classroom.

Table 5.3 Framework of capacity for autonomy in *CM* Lessons

Type of autonomy	**Definition**	**Context**	**Descriptors as instances of autonomy**
● Proactive autonomy ● Reactive	● Responsibility ● Decision-making	● Blended learning with computers in	● Interaction (see section 5.4.1; 5.4.2; 5.5)

autonomy	● Evaluation	the classroom ● Teacher as facilitator and moderator ● Self-regulated activity ● Collaborating with peers ● Striving towards common goals	● Freedom and choice (see section 5.2 & 5.5) ● Free expression in Putonghua (see section 5.3) - Student choice to use Putonghua - Reduced Cantonese - Increased interaction in Putonghua ● Explicit interaction - Writing (see section 5.6) - Speaking (see section 5.4.1) ● Implicit interaction - Reading (see section 5.6) - Listening (see section 5.4.1) ● Self-directed & relatedness to personal experience (see section 5.4.3) ● Expert support (see

			section 5.5) ● Proactively engaging with peers and lesson (see section 5.6.1) ● Reactively responding to the task, lesson and others (see section 5.6.2) ● Reactively following direction and interacting with peers and lesson (see section 5.6.2)

The term ‘autonomy’ in *CM* lessons has been identified where students showed signs of taking responsibility by making decisions and evaluating their learning experience (column two). The column one shows that engagement with the *CM* lesson can be described either as proactive or reactive autonomy (Littlewood 1999 summarized in Chapter 2). After indicating various characteristics about the context of *CM*-mediated blended learning in column three, a series of instances of autonomy as descriptors are captured and categorized in column four. It is indicated that the *CM* introduced flexibility to the classroom, with the freedom that required responsibility, independent decision-making and evaluation. Students valued having the responsibility of *CM*-mediated access to the internet and the interconnectedness between elements of the learning environment, suggestive of the ecological notion of the ‘totality of

relationship' (van Lier 2004: 3), which was perceived to add values to *CM* lessons.

5.8 Conclusion

CM promised the learner more than a platform designed to support technologically mediated Putonghua programme. In the *CM* classroom students' perceptions of their *CM* experience are corroborated by their online activity, revealing the choices and decisions they made in using the TLE. In other words, the value students attributed to their experience of using *CM* corresponds to their concerns about using the target language more freely and communicatively in their *CM* lessons. In the next chapter I turn to consider the students' free-time use of the TLE, comparing their perceptions and online movement beyond the classroom.

Chapter 6 Perceptions & Reality II:

Students' Free-time Response beyond the Classroom

6.1 Introduction

In this chapter, I look beyond the boundary of the classroom into the more virtual terrain of the students' free-time use of *CM*. classroom-mediated, teacher-led use of the platform has a characteristically familiar pedagogical format, but with free-time access, there is no guarantees that that the students will log on, raising the risks in exploring the nature of the relationship between autonomy and technology. This chapter explores how these students perceived the *CM* as a means by which they might become more autonomous learners and examines how closely their perceptions corresponded to the reality of their free-time use of the platform.

The chapter begins with the discussion of free-time mode in terms of discussion forums. Amongst different discussion forums, RTR emerged as the most frequently accessed forum. All significant free-time activities were thus directed around it. Along this line, students' perceptions of free-time engagement with the *CM* are then discussed in terms of their explicit and implicit response to the RTR forum. The chapter then analyzed a variety of forum writings for the wider audience. It concludes with the summary of the notion of autonomy and relevant instances of autonomy in students' free-time beyond the classroom.

6.2 Free-time Mode: Discussion Forums

The forums were a dynamic and free-time component. At the start of the *CM* programme the forums were empty spaces to which the students were invited to contribute their ideas. Four of the five *CM* forums were made available as spaces that were student-led, where there was no significant expert presence. Other than initial student curiosity in what *CM* had to offer, activity in the student-led forums was

limited. By contrast of this, the approach adopted in the expert-led forum was different. As mentioned in section 3.7.2, Read, Think and Reply (RTR) forum had a low-level expert presence. The teacher generated and posted a weekly discussion thread, unrelated to the *CM* classroom lessons. The 'expert' thread was posted at the weekend, scheduled to arrive in the students' free time. Although the teacher reminded students to check the site, Amy pointed out that '*everyone says "yeah I'm going to do that later"…then when you are at home you don't have time*'. As an insider researcher I never responded to the students' contributions and the extent of my contribution did not go beyond the generation of the weekly thread. In fact, RTR emerged as the most frequently accessed forum. All significant free-time activities were directed here.

For these students, discussion forums, embedded within a language development environment, were a new writing venture. Unlike classroom writing, replies could be formal, informal, long or short, adherence to form was not obeyed and students posted into a public area. Students were invited to contribute, but unlike an assignment, they received no expert feedback or correction, enhancing the difference with the familiarity of the 'traditional guided instruction' (Crook 2004: 79). Students were made aware that *CM* assignment and postings were not graded. At the early stage of the study, some students have ever questioned the value of participating in this programme which did not bear the familiar hallmarks of a language learning course. A recurring theme consequently emerged in some students' posts which was to '*enjoy the experience and see it as an opportunity to learn about online course*' (Siu).

Although the choices learners made by engaging with the structure of the expert-led forum has the appearance of guided familiarity, they showed to progress in their ability to learn by conceptualizing their own learning experience. Observational data from site records (see section 6.3) illustrated the extent of students' free-time

proactive and reactive, explicit and implicit engagement, indicating patterns of activity, rather than the reasons underpinning the activity, nor the value students attributed to their participation. Students may have felt obliged to respond to the expert-led RTR forum as a homework task, or felt they were helping the researcher.

Learners' responses may have been linked to external demands, rather than as an autonomous expression of cognitive learning strategies and their capacity to reflect and choose whether to participate, raising questions about the extent to which they were the 'active agent' (Benson & Voller 2007: 7). Alternatively, students may have conceptualized free-time participation on the basis of their 'own understanding of what is valuable and worth doing' (Wall 2003: 308) and that they could engage more 'freely and spontaneously' (Lantolf 2003: 367) with the language, which would correspond with their concerns about the difficulties associated with using the target language.

6.3 Student Perceptions of Free-time Engagement with the *CM*

Holec (1981: 7) argues that the autonomous learner is capable of making decisions about his learning within a defined structure. For these students in the study, the forum was a pedagogically new medium, and they identified and responded to the opportunity to practice the target language in a less formal and communicative platform that was different from their classroom, suggesting their ability to 'adapt cognitively to, and conceptualize the value of, this learning experience' (Esch 2006: 36). In the face of the weekly RTR postings, students may have felt obliged to respond to as a 'homework' task, or chosen to proactively participate in.

6.3.1 Students' Explicit Response to the RTR Forum

In striving to gain insights into notions of obligation or choice, it serves us well to

begin with the students' free-time forum activity. Table 6.1 indicates the number of free-time threads and return posts to the expert-led RTR forum. The most significant level of explicit activities was in the expert-led RTR forum.

Table 6.1 RTR forum – free-time threads, posts and views

Forum name	**Description**	**Threads generated**	**Posts**	**Views**
Read, think & reply (RTR)	Posting of discussion topics	● 13 (expert-generated threads) ● 5 (student-generated threads)	236 (replies to expert-generated threads) 16 (replies to student-generated threads)	1889

Free-time *CM* participation was predominantly driven by the stimulus of the weekly thread posted to the expert-led forum. As the data in Table 6.1 shows, students may have replied with such regularity to the RTR forum in their free time because the forum was defined by a weekly 'homework' task, compounded by the culture of teacher/learner dependency in a traditional guided learning model. In asking for the purpose of the formation of the weekly RTR thread, Amy said in interview, '*I'm just replying, but I'm not quite sure what's this…I don't know why we need to do this…is this homework*?' Amy's thoughts indicate that learners may indeed have perceived the RTR thread to be a homework task; but this reveals nothing of the value that may

have attributed to their participation. How far did the students feel duty-bound to respond online or did they engage freely with the RTR forum? Table 6.2 provides a summary of the students' reflections.

Table 6.2 RTR – free choice or obligation?

Free choice	**Obligation**
It's like free choice, but the teacher says you are supposed to do that. (Zoe)	When I am at home I have my tasks, assignments and RTR and then I work, I post it. (David)
I saw it like something as not obligatory. (Carol)	Is this homework, or what's this? (Amy)
No! Free choice, because not all of us answer them and most of us read them…(David)	I thought it was a kind of obligation for us to do that. (Simon)
I just reply to the ones that I really like. (Kai)	They think it's not important maybe because it's not part of our homework. (Yoko)
I think it was free choice…in my case I wanted to share my ideas. (Vicky)	Is this homework, or what is this? (Kai)
Thanks for telling me that I can choose, I didn't stop answering you but right now I am answering you because I want to. (Kai)	
The forum is not for you…just for other people to read it, but not for	

you…writing the assignment I know that I have to submit it to the teacher before the deadline. (Siu)	

A spectrum emerges relative to perceptions of responsibility, obligation and action in response to the structure of the expert-generated RTR thread. At one end Simon and Yoko saw the expert thread as homework, responding dutifully. In the middle of the spectrum, David located RTR posts alongside his assignments in describing the organization of his workload. Yet he considered RTR posts as free choice because '*not all of us answer them and most of us read them*'. The light of David's phrasing, 'not all of us' alongside 'most of us' offers an insight into his conceptualization of their freedom to choose whether or not to contribute. Towards the far end of the spectrum, Siu highlights the juxtaposition of the assignment and forum postings, indicating the difference between the pressures of working to meet assignment deadlines, unlike the forum. Siu's choice of the adverb 'just' implies that in the forum he valued the freedom of writing for others, rather than the critical eye of his teacher.

Kai's response lay at the opposite end of the spectrum when he learned that contribution to the forums was voluntary. Rather than withdrawing, he became more proactive; not only replying to weekly RTR posts, but generating his own threads, increasing his free-time use of Putonghua. He described feeling liberated by the freedom to make meaningful choices, participating because he wanted to rather than out of obligation. Different levels of free-time *CM* activity to RTR imply the learners' capacity to make own decisions about levels of participation. However, they preferred responding to expert-generated threads, not student-generated threads as Table 6.1

indicates. At first sight, this suggests that they engaged with *CM* in 'predictable teacher pleasing ways' (Hawisher & Selfe 2001: 55), reflecting 'traditional notions of education that permeate our culture' (ibid.), and characteristic of the guided learning pedagogical tradition.

Student behavior in the forums may have mimicked that of the classroom, even though they received no expert interaction or feedback, nor were they graded for their writing. Indeed the forum was remote from the conventions of the traditional classroom, raising questions about the reasons underpinning their continued engagement with RTR and the value they attributed to their participation. The question of learner agency and meaningful choice emerge: '*it's not a homework but it is a kind of homework because you have created engagement and a kind of compromise with the programme'* (Amy). I asked learners why they generally replied 'reactively' to expert-generated threads rather than 'proactively' generating and replying to one another's threads. Their views are summarized in Table 6.3.

Table 6.3 RTR – responding to the voice of authority

• Because umm…the teacher is an expert, maybe they (the classmates) see you as an expert doing these kinds of things, but they think, 'uh, David, it's David'. (David)
• Maybe because they (the classmates) think that it's not so important to reply to each other. (Yoko)
• Someway, somehow you are the authority in that case and everybody's replying to you. (Amy)
• If the teacher will say 'everybody let's reply to Simon' I can bet you that everybody is going to do that. (Simon)

- You (the teacher) are…maybe the guide for this programme…it's an authority. (Zoe)

They acknowledged that they were more responsive to an authority figure, an approach that corresponded to a more transmissive pedagogical culture. David was highly proactive onsite, generating a number of his own threads but he depressingly described his place in a virtual social order. He believed that he received few replies to his thread because he was not seen as an expert. He felt '*disappointed and sad because I try to look for topics, interesting topics for my classmates*'. Simon thought his classmates would reply to one another if they were instructed to do so, but that '*I am not an authority there*'. Similarly, Yoko reflected that her classmates probably thought it was not as important to reply to one another. Comments from the students captured in the self-report data (Table 6.4) indicate why students chose not to generate proactively threads and shed light on where they located themselves relative to the social milieu of the forum.

Table 6.4 Reasons for not generating threads proactively

Reasons 1 – concern about what others might think	**Reason 2 – difficulty in finding a topic that might interest classmates**	**Reason 3 – leave it to others**
Because sometimes many students could think that is a waste of time, I don't think so, but many times	Because it is difficult for me to think on a topic that could encourage others to respond.	Because I know that most of my classmates have written often in the forums.

this discourages me.		
Because I am a bit shy.	Many times I don't know what the preferences are.	Because I know they are doing them.
Because if they don't feel like sharing their ideas with their classmates they won't make an effort to write what they really think.	Because they have good ideas and sometimes their ideas are much better than mine.	Maybe because I'm sure they have done them.

Their reasons show the fragility of relationships between class members. Fear of rejection from class members offers a possible explanation for their reluctance to generate one another's threads. Replies to expert threads appeared with relative anonymity because posts appeared in the 'mix' among those of their classmates. Generating new threads exposes the learner within a more public space because the parent thread appears at the top of the screen with the name of the person who started it. *CM* site records corroborate the students' concerns about what their classmates thought of them, an anxiety which is compounded further by their awareness that in the RTR forum '*not all of us answer them and most of us read them*' (Carol).

However, in this forum students still embraced the structure of communicative affordances mediated by the 'architecture of electronic space' (Hawisher & Selfe 2001: 1) with the promise of more democratic participation, supporting those 'traditionally shut out of discussions' (Warschauer 2007: 472). The weekly task created communicative context for the students to respond to. In evaluating students' personal response in terms of their onsite activity and notions of autonomy, what

emerge is the web of interaction as students read and reacted to one another's ideas – the interconnected links between ideas expressed by the learners, suggesting the possibility of an ecological view of autonomy.

Site records indicate that students made choices about their free-time use of the TLE, selecting the affordance and level of participation with which they felt most able to engage. Most students chose to respond reactively to the structure of the expert-generated thread. Few students chose to participate proactively student-generated threads and even generated own threads. This response supports Manson's (2001: 69) argument that 'simply providing an environment…did not guarantee successful engagement'. RTR satisfied the students' desire to use Putonghua more extensively beyond the classroom, and they responded to the structure of RTR as a space where they could engage communicatively in Putonghua in response to a clearly defined task. By contrast, the student-led forums created a less-defined space with no clear reason to engage.

The explicit choices learners made in terms of free-time *CM* engagement mirrored the guided learning model as students following the lead from the 'expert'. However, one should not overlook the significance of implicit online interaction in Putonghua between students relative to notions of autonomous behavior.

6.3.2 Students' Implicit Response to the RTR Forum

As the students reflected upon the value of the *CM* platform, they not only mentioned the significance of contributing to the forums, but significantly some of them referred to the importance of reading their classmates' contributions. The number of free-time, non-contributory visits made to the RTR forum is an indication of the extent of their implicit interaction (see Table 6.1). Yoko reported that because she knew her message would be read by her classmates, this focused her attention to linguistic accuracy.

Explicit interaction by posting to the forum left a trail of evidence marking the students' presence and participation and the development of ideas between contributors. Implicit engagement may have left no trace of their online presence but 'viewing which area has been visited by other students is an indirect mode of interaction' (Dillenbourg et al. 2012: 5). Implicit participation outweighed explicit participation, challenging the argument that students felt duty-bound to participate. Students may have logged in and participated, whether implicitly or explicitly, because they wanted to. Interaction was directed to the structure of the expert-led forum, but their onsite personal response to the TLE suggests that their actions were self-directed.

Interview data corroborate *CM* site records, revealing that learners engaged with their classmates' postings. Zoe expressed surprise as she recollected her classmates' posts following a Valentine's Day thread, '*I can read all my classmates' opinions and I didn't know what they think about that date, so when I read it I was like surprised because I didn't know that they thought in that way*'. Students cognitively engaged with the language and meaning they wanted to convey because they knew that everybody will read it, heightening their awareness of the challenges associated with using Putonghua publicly and independently of the classroom.

In the technologically mediated community of RTR, postings do not exist in isolation. Learners' decisions to engage with the forum represented more than a response to the expert-generated thread, they responded to those who populated the space. Yet their reasons for choosing RTR, overlooking other affordances, remain unclear. RTR threads were designed to be intellectually challenging. Students reported that reading their classmates' posts stimulated the construction of their replies as the following comments indicate:

Simon: Because of other's writing I thought okay I can express it, so I wrote.

Carol: I see what the other students have replied and then I have replied.

Mark: If my classmates write a reply to the post, I read, and also I realize my ideas.

Simon found that the reading and writing of posts valuable because students shared ideas online '*We are replying and talking about some topics and sharing ideas and it's good because you do realize what other people think about the topic*'. A similar pattern emerged when students were asked which posts they would be most likely to read and why (see Table 6.5). Most students did not specify names, but they mentioned the value of reading one another's postings.

Table 6.5 which students' postings would you be most likely to read?

I would read posts written by…	**Reason**
Simon	Because he knows a lot of Chinese culture.
David	In a funny way
Amy	She always gives something interesting.
Carol	Her commentaries give an idea about the topic.
Yoko	I think it is important because she has interesting opinions.
Classmates	● To check the point of views of others. ● I would like to know what they

	think about this topic. ● All of them think differently so that I always want to learn something different from all of them.
No names specified	● Maybe the first one who has the courage to post something for people to discuss about it would be the most interesting for me! ● I often read all the postings because I would like compare my idea with their ones.

Students valued the exchange of ideas, appreciating differences in perspectives on a variety of topics, as well as the opportunity to compare their views with those on the forum. The students said they valued and felt encouraged to post to the forum by reading one another's contributions, suggesting that free-time use of the TLE stimulated autonomous learner behavior. Moreover, they demonstrated an implicit and proactive response (i.e. choosing to read) to the TLE which stimulated explicit and reactive interaction (i.e. choosing to reply).

It could be argued that this supports Little's (2000: 7) view that as individual 'our independence is balanced by dependence', enhanced by the ecological view, connecting cognitive and social processes of a socially interactive fluid interrelationship between elements which characterize the dynamic of autonomous learning. In order to gain closer insights into this as a possibility it becomes necessary to examine students' RTR posts and threads for signs indicating the relatedness

between contributions, in other words the ecological ‘totality of relationships’ (van Lier 2004: 3) between posts.

6.4 Forum Writing for the Wider Audience

The longer the trail of posts in a forum thread, the greater the chances of detecting thematic patterns. The threads selected for closer examination are thus those that achieved a high response rate in the *CM* programme. Typically in non-collaborative classroom writing, output is a private matter between student and teacher. Writing for the forum was not a collaborative writing activity; however, students repeatedly indicated that they were aware that this was a public arena, reading and getting ideas from each other is before constructing their own replies, a view corroborated by Lee’s (2011: 88) research into asynchronous writing through blogs and her suggestion that ‘blogs increase students’ participation and motivation because they are intended not only for a sole instructor but rather for a broad audience’.

Scrutiny of RTR posts should reveal whether the students drew inspiration from one another’s work, or whether posts existed in isolation. By mapping the trail of thinking between the first and last posts in one of the threads one can evaluate the ecological possibility that ideas evolved along the post trail, corroborating students’ reports that online implicit interaction stimulated explicit interaction. Learners’ engagement with the processes associated with conceptualizing and responding to information in an online context emerges, suggesting that technology has the potential to activate cognitive and metacognitive learning strategies.

6.4.1 Thematic Similarities between Posts

Many RTR posts were thematically linked, but this may be an indication that students replicated one another’s ideas to complete the task rather than thinking autonomously.

For instance, one parent thread invited the students to consider '*The best age to be…*' Carol opened the discussion with two key ideas: '*Each age is special and every stage in our life is important*' and '*I think the best age is the time that we are living*'. These ideas can be traced throughout subsequent postings, illustrated in Table 6.6. Students may simply have read Carol's reply and plagiarized her ideas. Nevertheless, in relation to their personal response to the TLE in terms of autonomous onsite activity, they logged into the site in their free time, read and engaged with ideas mediated through the forum, suggesting that proactive and implicit interaction stimulated reactive and explicit interaction. Despite recycling ideas, analysis of posts supports the view that students read one another's writing and the sense that they were not writing in isolation, but for 'an audience of critical peers' (Sotillo 2002: 16).

Table 6.6 Thread – '*The best age to be…*'

Every age is special	**The present is the best age**
Every stage in our life is important. (Carol)	I think the best age is the time that we are living. (Carol)
Every age in this life is good, you just need to enjoy every moment in it. (Amy)	I think no exact ideal age but we should enjoy the things which you live in the present. (Kai)
Every stage in your life has some particular characteristics that make it unique. (David)	Now I'm 19 and I feel very good and happy, but as my classmates have said, in a year I would say that 20 is the best age and after that 21. (Vicky)
Each age you live in a different stage and you experiment different moments.	I think that the best age for everyone and to me is the one we are living now.

(Zoe)	(Simon)
I think all the years are good in a very different way! (Siu)	
I consider that every age, every stage of our lives is important. (Mark)	
As most of my classmates said, I think that there's something special in each single age. (Yoko)	

Yoko and Vicky made public references to their classmates in their posts, '*as most of my classmates have said*' (Yoko), and '*as my classmates have said*' (Vicky), substantiating self-report data that students were aware of one another's online presence. There is an interconnectedness between replies, which is a pattern that appears in other threads. As Table 6.6 shows, repeated references are made to 'every age' and 'every stage' by Carol, Amy, David, Zoe and Mark. Although Siu and Yoko make different language choices, they repeat ideas expressed by others. Whether students followed the same or different themes, agreed or disagreed, there is evidence from their personal free-time response to the TLE of their awareness of one another's online presence, responding and transforming ideas in a non-linear way to ideas expressed along the post trail.

Students predominantly responded reactively to expert-generated threads, rather than proactively by generating and responding to their own threads. Although they made few explicit references to one another in their posts, closer scrutiny reveals links between students' contributions. Free-time implicit and proactive interaction generated explicit and reactive interaction. This would suggest that the value of RTR

was in providing a stimulus and reason to use Putonghua communicatively beyond the classroom, which corresponded to the students' concerns about their lack of opportunity to use Putonghua. Learners not only responded to the stimulus of the task, but to one another so that the forum acquired 'meaning and structure through actors' interpretations' (Hutchby 2001: 29). In the next section, it discusses the ideas that evolved along the post trail, supporting van Lier's metaphor of ecology again.

6.4.2 Evolution of Student Ideas along the 'Post Trail'

Students responded to the weekly RTR posts on two levels. First they responded to the task, by contributing similar themes and ideas. On a more complex level, their thinking evolved along the post trail in response to the parent thread. For instance, one parent thread invited students to consider 'I wish more people would take notice of…' offering three examples as a model (Table 6.7). The subsequent thread suggests implicit interaction between students, but without explicit reference to one another. However, the following table (Table 6.8) shows the order in which students posted to the site with the different dates and times they posted and the evolution of ideas emerges.

Table 6.7 idea modelled in the parent thread – 'I wish more people would take notice of…'

● The words of wisdom expressed by our children.
● The beauty of the world around them.
● What they already have, not what they wished they had.

Table 6.8 tracking the evolution of the theme within a thread

- Listen to the birds with the sound of the wind against the leaves. (Mark – Monday, 17 July 2017, 11:15 PM)
- Take notice of problems such as global warming. (Zoe – Tuesday, 18 July 2017, 01:34 PM)
- The sound of the tree leaves…the things that you can feel while the wind is touching you. (Yoko – Friday, 21 July 2017, 10:14 PM)
- Our world…and its part of the place we live, so we should take care of it. (Siu – Saturday, 22 July 2017, 08:44 PM)
- Everybody needs to take care of the Earth planet. (Carol – Saturday, 22 July 2017, 11:18 PM)
- I wish more people would take notice of the world. (Kai – Monday, 24 July 2017, 11:13 PM)
- Global warming, *poverty* and the injustice are in all the world. (David – Tuesday, 25 July 2017, 01:43 PM)
- I wish more people take notice of the *poverty* of our world…the tiny things that we can do in order to help people as homeless and abandoned children!!! (Vicky – Wednesday, 26 July 2017, 08:35 PM)
- I wish more people take notice of the violence in the world. They just don't care the damage they make to children. (Simon – Friday, 28 July 2017, 12:04 AM)
- Notice the beauty of the world around them. (Amy – Saturday, 29 July 2017, 07:17 PM)

Ideas are reworked and the theme 'the beauty of the world around them' from the parent thread model transforms from Mark's simple image, '*Listen to the birds with*

the sound of the wind against the leaves', towards profound reflection about the fragility of the world and the damage caused by man, '*the violence in the world*', (Simon). The circle is completed as Amy returns optimistically to wishing that more people would take '*notice the beauty of the world around them*'. David's idea on poverty is followed up by Vicky in the next post, reminiscent of Kessler's (2009) study in which students prioritized the exchange of meaning. Tracking the times when students posted supports the self-report data of the value they attributed to the dynamic web of interaction, reading, thinking and responding to one another's ideas. In other words, the importance of 'totality of relationships' (van Lier 2004: 3) mediated by the TLE.

In terms of the students' personal free-time response to the technology, they made self-directed evaluations and decisions, demonstrating an awareness and relatedness with others. They chose to log in, read, reflect and respond to the ideas expressed along the post trail suggesting that implicit peer interaction stimulated explicit free expression in Putonghua in the construction of their own replies. Data indicates that students resisted proactively generating their own threads, preferring to respond reactively to threads. Patterns of free-time interaction emerged as students responded to the weekly expert-generated threads mediated by the RTR forum, overlooking other student-led forums.

Closer analysis revealed that students were doing more than dutifully completing their weekly RTR homework task, and that they were not working in isolation from one another as posts were thematically and linguistically interconnected. In doing so, they showed their 'capacity to take charge' (Holec 1981: 7), proactively logging in to read one another's contributions, choosing whether to respond to the weekly RTR thread and one another's thinking. The students' contributions to the RTR forum provide us with evidence to suggest that learners showed signs of autonomous learner

behavior in response to the technology. The reality of our students' experience closely resemble their perceptions of the value they attributed to their free-time use of the *CM* platform.

6.5 Summary: Capacity for Autonomy in Free-time

Self-report data may not accurately reflect the students' thinking as they may want to provide the 'right' answers in the presence of the researcher, but site records corroborate their views. The students' writing in response to the TLE emerged as one of the most significant factors to further constitute their *CM* experience. Free-time *CM* postings corroborate self-report data that they valued the ideas expressed by their peers, through thematic and linguistic references to one another that ran throughout the threads. The notion of autonomy within a TLE is not a simple matter of liberating students from rules and boundaries so they can make their own choices. Patterns of student behavior emerged during the *CM* programme that corresponded to their concerns about practicing the target language. It could be argued that their personal response to the TLE was not a manifestation of autonomy because they predominantly responded to expert-generated RTR threads but this makes light of the concept of autonomy, excluding one's internal capacity to think and respond autonomously to others within a structured classroom.

Students' free-time interaction with the TLE was framed by a series of conditions necessary for autonomy to be achieved: that the learner should be capable of making decisions and taking charge of his learning, and that there should be a structure within which the learner can exercise his potential for autonomy (Holec 1981). In the free-time component, autonomy emerged from the learners' personal response to the RTR forum (Table 6.9). The structure of the weekly RTR threads stimulated a pattern of free-time language behavior unlike the student-led forums, which seemed

pedagogically remote and ill-defined. The weekly RTR thread anchored a communicative and predictable web of interaction, mediated by the technology, leading us towards an ecological view of autonomy. For the students involved in the *CM* programme, everything is connected to everything else, as students cognitively engaged with one another's ideas; decided whether to contribute their opinions; constructed and posted their own replies. They transformed the original ideas from the parent thread and the online discussion.

Table 6.9 Framework of capacity for autonomy in students' free-time

Type of autonomy	**Definitions**	**Context**	**Descriptors as instances of autonomy**
● Proactive autonomy ● Reactive autonomy	● Reactively responding to expert-generated RTR threads ● Reactively responding to student-generated RTR threads ● Proactively generating own threads	● Writing forum posts ● Reading forum posts ● Writing assignments ● Discussion with classmates ● Reading additional resources	● Self-directed (see section 6.4.2) ● Relatedness to others (see section 6.3.2 & 6.4.2) ● Interaction (see section 6.3 & 6.4.1) ● Choice & freedom (see section 6.3.1)

	in the weekly RTR forum		● No expert support (see section 6.2) ● Reactively task directed (see section 6.3.1) ● Reactively responding to others (see section 6.3.2)

6.6 Conclusion

In the classroom and in their free time, the students' perceptions of the *CM* experience are corroborated by their online reality, revealing the choices and decisions they made in using the TLE. The value students attributed to their experience of using *CM* corresponds to their concerns about using the target language more freely and communicatively in their Cantonese-speaking guided learning environment. In the next chapter I return to the main themes that emerged from the literature and consider these in light of the insights about our learners' response to *CM* to see what can be learned about the nature of the relationship between autonomy and technology in the context of language learning.

Chapter 7 An Ecological Perspective of Autonomy and Technology

7.1 Introduction

In earlier chapters, I examined the themes that emerged from the literature and evaluated the students' personal response towards a TLE. This chapter brings together the data findings and attempts to analyze them from an ecological perspective towards insights into the nature of the relationship between autonomous learner behavior and technology.

As the previous two chapters indicate, students showed signs of autonomous behavior during their *CM* learning programme. It could be argued that 'educational technology is an effective purveyor of learner autonomy' (Murray 2009: 296). Though a compelling proposition, this view draws a simplistic correlation between the tool and the outcome, failing to address the complexities associated with the notion of autonomy and the impact of introducing a TLE into the students' learning environment. Three significant aspects of the students' response emerge from the evaluation of their blended classroom and free-time use of *CM*: response to direction; response to the environment; and response to direction and the environment (Table 7.1).

Table 7.1 Three significant aspects of the students' response

Response to direction	**Response to the environment**	**Response to direction and the environment**
Signs of autonomous behavior result predominantly from the direction or guidance	The introduction of the technology introduced a virtual element in the classroom, extending	Students responded to the task mediated by the TLE, but the technology altered the configuration of the

suggested by the task rather than from the technology. The same effects would be achievable if learners were given the same tasks in a course book instead of a TLE.	access to learning into the students' free time. The configuration mediated by the TLE altered the dimensions of interactions between students in class and in their free time. Autonomous learner behavior was attributable to ecological changes brought by technology.	learning environment, influencing classroom and free-time interaction between students. Autonomous learning behavior resulted from the task and the environmental changes brought by technology.

The discussion of these three main aspects is anchored within the perspective of the ecological approach, the central tenets of which form the background to this chapter. By way of framing the discussion that follows, I begin with a review of the principles underpinning the ecological approach in Chapter 3, before analyzing the students' respective perceptions and reality in the blended classroom and in their free-time strand, from this juncture I address the three aforementioned aspects in turn. A discussion on learner autonomy in relation to the use of technology is further presented, from which a division of individual and group autonomy is also illustrated.

7.2 An Ecological Perspective

Language teachers worldwide would no doubt prove to the merits of supporting the individual's capacity to make choices and engage freely and communicatively in the target language. In a technologically supported environment this might be in response

to screen-mediated stimuli introduced into a language-learning environment. Holec's (1981: 3) view that the student should be capable of taking charge of his learning within a learning structure highlights the role of the student and the significance of the context. This is reflected in the framework in Figure 3.1 (see section 3.2.1.4), where the learner is located at the center of the context within which he exists.

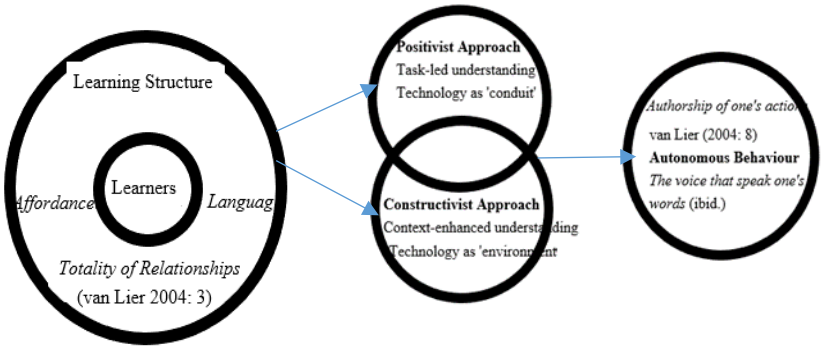

Figure 3.1 Framework for autonomous learning behaviour in a TLE

In addressing the three main aspects of the students' response, I draw on three elements from the ecological approach: the 'totality of relationships' (van Lier 2004: 3), the notion of affordances and language, as they relate to the TLE. Ecologically speaking, context is described as lying 'at the heart of the matter' (van Lier 2004: 5). Context immerses the student in language, but also defines the language used while being defined by the language used. This suggests an evolving communicative dynamic, as students respond to stimuli and to one another. Context provides an array of activity spaces, from the TLE classroom to free-time TLE access. As the student becomes more actively engaged with affordances presented within the learning structure, so the affordance grows in relevance and meaning as students respond by using the target language to interact with one another.

In reflecting upon the students' personal response to their TLE experience, I draw on two contrasting stances illustrated in the framework. The first stance,

described as the positivist approach, reflects Crook's (2004: 79) term 'traditional guided instruction', and the second stance, described as the constructivist approach, is one in which the student is less guided towards the acquisition of knowledge but works independently towards the construction of understanding by psychologically engaging with the processes of learning. Each stance accords a different significance to the factors students respond to in the learning structure so that the interpretation of the task and context in relation to learner behavior is different. Alternatively the students' response might be an eclectic blend of these two contrasting standpoints.

From the positivist position, students respond to the characteristics of the task or affordance, when the 'intended use is designed into it' (van Lier 2004: 95). For instance, the introduction of new vocabulary, or speaking for fluency. Desired outcomes might be achieved through the selection of appropriate affordances, which has been chosen on account of their fitness for purpose by an external agent. In the context of a TLE, the technology might be described as the conduit for the affordance, like the course book or photocopied handout. It is the individuals' response to the affordance mediated by the TLE that stimulates the behavior rather than the inherent characteristics of the technology.

From the constructivist position, student arrive at new understanding in response to the multiple stimuli that characterize the context within which they find themselves. Introducing new stimuli changes the composition of the environment. Learners adapt their behavior in response to the reconfigured structure, with an impact upon the language used and the choices they make relative to the affordances for learning and the 'totality of relationships' (van Lier 2004: 3) between class members. If the students' personal response to the TLE in terms of their reflections and online activity can be attributed to the reconfigured composition of the learning environment brought by the technology, a relationship might be thought to exist between the

technology and autonomous behavior.

Alternatively, the students might respond to the design intentions of the affordance suggested by the positivist, as well as the constructivist approach in which the dimensions of the learning structure are transformed by the introduction of the TLE, so enhancing learner behavior and language development. This possibility is represented by the overlap between the positivist and constructivist circles shown in Figure 3.1. Therefore, there is a sense in which the student can fulfill his potential for autonomy from both the positivist and constructivist perspective. This notion serves to ground an emergent understanding of the nature of the relationship between autonomy and technology. In the next section, the students' perceptions and reality in the blended classroom in Chapter 5 are first summarized and then analyzed from an ecological perspective.

7.3 Student Perceptions and Reality in the Blended Classroom

Students widely reported that they perceived the value of blended lessons in terms of improving and creating opportunities for interaction in Putonghua, independent thought and action in response to one another's contributions within the structure of the lesson. Their views corresponded with their concerns in Chapter 4 that before the introduction of the TLE they had limited opportunities to use Putonghua outside the classroom and that their classroom represented their only target language community. Yet they expressed a reluctance to use Putonghua in class, except with the teachers, and only shortly with one another, reporting that they felt inhibited by the external constraints of the syllabus and the more transmissive teaching style of their learning environment.

The introduction of the TLE brought increased levels of responsibility associated with managing the site, indicating a sensitivity to the differences brought to their

learning environment by the technology and demonstrating the students' potential for embracing increased levels of responsibility, reflecting their capacity for proactive autonomous behavior (Littlewood 2009). Moreover, students valued the added dimension the technology brought to their lessons. Hyperlinks embedded into the TLE facilitated the opportunity to move easily between screens to check information. The experience was enriched further as students reflected on the value of using the internet to find more information about topics covered in the lesson leading into lively classroom discussions. Technology introduced a virtual dimension, extending the boundaries of the lesson beyond the dimensions of the 'page' to the world-wide web. Technology emerges as a component with the potential to enhance the notion of interconnectedness between internal and external dimensions of autonomy.

Although self-report data make it difficult to corroborate with any degree of certainty and the reality of these students' response to the TLE and reported instances of autonomy, analyses of observational data sources indicate this to be the case. Assignments and forum posts shared thematic patterns and different ideas were re-emerged and expressed in the students' writing as well as their classmates' writing. Site records reveal something of the dynamic of the online activity in class. Students responded to increased levels of responsibility, choosing to stay on track and follow the flow of the lesson, corroborating the self-report data. Students claimed that blended lessons enhanced their learning experience, bringing a new dimension to their classroom.

7.3.1 The Positivist View: Autonomy led by Design in the Blended Classroom

Students reported that they used Putonghua more extensively in their blended lessons. Learner behavior mirrored the conventions of the traditional classroom. When the teacher conducted the first session of *CM* lessons from her laptop using an overhead

projector in the classroom, this altered the 'totality of relationships' (van Lier 2004: 3) between class members. The teacher adopted her usual place at the front of the class leading the students throughout the first session of the *CM* lesson, where interactions were more linear, guided and mediated predominantly through the teacher. But some students valued the authoritative presence of the teacher, who chaired the discussion, guaranteed fair play, provided cohesion to the group and technologically controlled the pace of the lesson. In short, they liked the 'coercive nature' (Murray 2009: 300) of *CM* in the classroom, because the presence of the teacher created the time and space for them to attend to TLE-mediated affordances. This suggests that these students valued learning opportunities created by the design and content of the lesson rather than the advantages afforded by the technology per se.

The concept of an affordance, not only incorporates the sense in which opportunities exist for learning, but also captures the random sense with which the individual might respond to one opportunity while overlooking another. The ecological approach theorizes that 'affordances are detected, picked up, and acted upon' (van Lier 2004: 91) as they relate to the individual, and depending on whether they are conceptualized as being of value. *CM* blended lessons were constructed with clear TLE-mediated design intentions which the students recognized as being '*like a question and all the class have to discuss it and give our own point of view*' (Yoko). Yoko's comment indicates that students responded to the transparency of the TLE affordances and felt encouraged to express independently constructed ideas, rather than '*giving the answer that the course book requires*' (Simon). In line with the ecological approach, students responded specifically to those elements of *CM* lessons that corresponded to their concerns about their lack of opportunity to use the target language. Nonetheless, by design, they were guided towards an increased use of Putonghua, by responding to screen-mediated stimuli as they might, has the same

content been provided by a course book.

Central to the ecological approach is the idea that language is defined by the context within which it exists. But simultaneously, the language used by individuals defines the character of the context. From an ecological perspective, the language classroom provides learners with affordances designed to stimulate engagement with the target language. The language of the blended classroom was determined by the design, structure and direction of the materials provided, which is the 'semiotic budget' (van Lier 2004: 81). The 'semiotic budget' (ibid.) afforded by *CM* materials enabled students to feel that they could 'use the language for real communicative purpose' (Fisher et al. 2004: 51). The students' use of language might not be said to be directly attributable to the TLE but rather to the language of the blended classroom, which in turn was defined by the affordances mediated by the technology. By contrast, in the traditional classroom, students had reported that the academic demands of the syllabus provided topics communicatively inaccessible '*In classroom it's different because they are different topics like critical thinking…and you don't know anything about it'* (Mark).

Students felt more capable of expressing personally constructed topic-based ideas in response to *CM* lessons. However, linguistic behavior in *CM* lessons was defined by the conventions of the classroom context with learners attending carefully, taking notes and mindful of following up assignments. This guided approach towards autonomy suggests that learners can express their potential for autonomy by 'reactively' (Littlewood 2009: 76) responding to externally created conditions through the selection of appropriate materials, supporting them and allowing autonomy to flourish. Educators worldwide might agree that the reality of classroom management makes it difficult for students to respond 'proactively' (ibid.), because they rarely have a hand in selecting resources and initiating the direction of the activity.

Students valued the familiar structure of TLE-mediated lessons and the design intentions of affordances. A more spontaneous use of Putonghua emerged, anchored by the rubric of the task and conventions of classroom behavior. From the positivist perspective, students responded to the affordance rather than the technology, suggesting that autonomous behavior was not attributable to the technology, rather the technology was the conduit for affordances and subsequent learning behavior.

7.3.2 The Constructivist View: Autonomy as a Response to the Technologically Reconfigured Dimensions of the Learning Environment in the Blended Lesson

One can argue that the introduction of the TLE provided a stimulus that changed the configuration of classroom space, reshaping the interdependent network of relationships between class members where learning was 'non-linear…co-constructed between humans and their environment' (Kramsch 2002: 5). Students were aware that the classroom was the only place where they could practice the target language but widely reported that in the traditional classroom, interactions were hierarchical, with students providing the responses the teacher wanted to hear and where peer interaction in the target language was rare and reluctant. By contrast they reported more extensive peer interaction in Putonghua in the blended classroom.

I have previously suggested that students predominantly responded to the lead taken by the teacher rather than the technology in the blended lessons. I now adopt a different stance and consider the possibility that learner behavior was affected by environmental changes created by introducing the TLE to their learning space. Shyer students reported that they felt reluctant to make their voice heard in open class, but that they felt more confident in their second session of *CM* lessons in the computer room. The presence of the terminals in the computer room created a private space between partners. Students attended to their own screens instead of paying attention to

their classmates. Individual terminals reconfigured the communicative dynamic, altering students' response to screen-mediated stimuli and peer interaction in Putonghua became more accessible for shyer learners than the wide open space of the classroom in the first session.

The configuration in the computer room altered the dynamic of classroom interaction with the decentralization of learning away from the teacher. In the computer room learners did not feel the pressure of the teacher observing and monitoring or telling students what to do. Access to individual terminals altered learners' response to the lesson; they felt they were more actively involved, making their own choices and deciding the direction of peer interaction, rather than following the lead of the teacher. In this context it could be argued that changes in the classroom dynamic were not a response to the TLE, but a response to the physical differences between the computer room and classroom. *CM* computer room lessons introduced new levels of responsibility, choice and freedom, mediated by hyperlinks embedded within the TLE and with access to the internet, affecting relationships between learners during *CM* lessons, whether in the classroom or computer room.

Technological functionality embedded within *CM* lessons took the students beyond the limitations of the printed page. Students widely reported the value they attributed to improved levels of interactivity in *CM* lessons created by the hyperlinks, describing the TLE as '*dynamic…not flat*' (Simon) and viewing a conventional course book as '*some paper, some pictures*' (David). From their own terminals students were at liberty to move freely between screens and the internet, stimulating an increased perception of learner agency created by the opportunity to check information and consolidate their understanding so that they might contribute to the *CM* lesson. Although learners reported that they highly valued the potential promised by hyperlinked connectivity between TLE-mediated affordances, we should be cautious

in suggesting that the technological functionality embedded within the affordance significantly altered the configuration of the blended lesson. But importantly students perceived the TLE to promise them choice and freedom: '*the books are completely different because in this one [CM lesson] it's up to you…you don't have to see every page and like follow every topic*' (Carol). Whether they exploited those choices was in itself an expression of free will.

Students' perceptions of the value of technological functionality suggest that they believed the TLE to be a dynamic, stimulating learning environment. But like a printed course book, they were constrained by the limitations of the content provided. However, internet access in *CM* lessons increased spontaneity in response to the turn of classroom events. For example, the teacher responded to the students' discussion about Heroes and Icons in Lesson 8, which led to an online search about ancient emperors. Internet access took the class beyond the limitations of the screen-mediated rubric, enhancing and transforming the character and direction of the lesson. The potential to go beyond the range of the printed page excited and motivated the learners.

Ecologically it could be argued that the presence of the computer in the TLE classroom altered the communicative dynamic of the learning space. It is possible that the introducing the TLE created the conditions in which learners felt more encouraged to use Putonghua. One could argue that contextually the presence of the computer transforms the lines of classroom interaction, with implications for the students' use of language. In the teacher-led classroom, student contributions are guided by and directed towards the teacher, who interprets and redirects interaction back to the class. As the teacher brings coherence and cohesion to the lesson, students respond indirectly to their classmates. In the first session of *CM* lessons that took place in the classroom, students indicated that communicative dimension was '*more guided by the*

teacher' (Siu).

By contrast, in the computer room the teacher adopts a less dominant position, altering the lines of interaction, facilitating rather than directing the interaction. The configuration of the computer room changed the communicative dynamic. As the teacher stands aside, interactions are peer-led instead of teacher-led. Students interact directly to the ideas and language presented by their classmates rather than mediated by their teacher. In the computer room, the context created by the technology generates an intimacy between student pairings, allowing them time to '*talk and express our ideas'* (Kai). Yet the contextual configuration created by the presence of the technology brought increased responsibility for students to stay on task, impacting upon their use of the language as they worked together around their screens, proving challenging for some and frustrating others.

From the perspective of the constructivist approach, the students' use of Putonghua during *CM* lessons seems less a response to the inherent functionality of the TLE, and more connected to the changes brought to the learning space by the technology.

7.3.3 The Eclectic View: The Development of Autonomous Behavior Drawing on Positivist and Constructivist Approached in Blended Lessons

Theoretically one can argue that learners showed signs of autonomous behavior relative to their personal response to the TLE from two perspectives – the positivist and the constructivist approach. Both possibilities point to the ambiguity that has evolved regarding the nature of the relationship between autonomy and technology. However, there is a third possibility which is the overlap between the positivist and constructivist approaches indicated in Figure 3.1, described as an eclectic approach.

From the eclectic standpoint, the interpretation of students' personal response to

their TLE experience in terms of autonomy considers the possibility that autonomous behavior can emerge from the students' internal-cognitive response to the direction stipulated by the TLE task. Nonetheless, by introducing the technology, the dynamic of the learning environment is reconfigured, changing the 'totality of relationships' (van Lier 2004: 3) between class members, the affordances to which they respond to and their use of the target language. This indicates the possibility of an ecological version of autonomy, a view that enhances the perspective that 'independence is balanced by dependence' (Little 2000: 7) by acknowledging the dynamics of autonomous learning, where ideas are grounded by a task and mediated by the technology but transformed by human interaction.

The view of autonomy as freedom from control had led to the emergence of a polarized view that independence from the teacher is good, while teacher-led education is bad (Pennycook 2007). But this view ignores that the external framework of the learning environment might guide the learner so that autonomy in a classroom is possible. The dichotomy actually lies in creating the conditions necessary for autonomy to thrive by creating a structure that liberates the learner without abandoning responsibility. I propose that for these students, the introduction of the TLE created the necessary conditions for them to explore their potential for autonomy, by providing materials to which they could respond that corresponded to their expectations and experiences of language learning. In doing so, the dimensions of their learning environment were configured by the technology, influencing their response to the activities.

I have previously argued that interactions between learners in *CM* lessons were guided by the direction indicated by the affordances mediated by the TLE, raising questions about whether their personal response was attributable to the technology. Yet students' reports indicated that they used Putonghua more freely in response to the

structure of *CM* lessons, showing an inclination towards 'reactive' rather than 'proactive autonomy' (Littlewood 2009: 75). This is not to say that students' responses to one another in *CM* lessons were unaffected by the technology. I have discussed the impact of the technology on the classroom dynamic, introducing heightened levels of responsibility, which motivated some but overly challenged others, illustrating the view that autonomy is 'a highly individual construct' (Murray 2009: 301).

Some students valued the communicative freedoms created by the transformation from the linear and teacher-led classroom towards a more egalitarian environment where they felt less exposed by the wide-open spaces of the classroom. Others acknowledged that the reconfiguration of the learning environment brought by the technology proved a responsibility, affecting the dynamic between class members, reflecting upon the perceived value of the *CM* lesson.

An affordance is described as an opportunity that signals 'grounds for activity' (van Lier 2004: 5) to which the individual responds according to whether he perceives it to be of value. The students responded to the design intentions of *CM* lessons, followed screen-mediated directions and rarely deviated to explore additional resources. Yet they valued the approach adopted by *CM* lesson, responding to those elements that correspond to their concerns about language development. The students might have responded reactively to the structure of *CM* lessons rather than the technology. But the presence of the technology in TLE-mediated lessons altered the students' response to the content, introducing a new level of interactivity, taking the students beyond the page and creating the perception of a more dynamic and responsive environment.

From an ecological perspective, context is described as lying 'at the heart of the matter' (van Lier 2004: 5) where the learner is immersed in language and where

language defines and is defined by the context within which it exists. On one level the students' TLE-mediated use of language reflected the semiotic budget determined by the structure of *CM* lessons and the expert-generated RTR threads, but to suggest that their language was governed entirely by the direction indicted by the TLE-mediated materials would be a simplistic representation of student behavior in response to the technology. Closer analysis indicates a more profound level of linguistic engagement characterized by the configuration of the space in response to the structure provided by *CM* blended lessons and students' free-time access to the site.

7.4 Student Perceptions and Reality in the Free-time Strand

The free-time TLE strand presented students with a new language learning context with which to engage. They perceived that the value of their free-time participation with *CM* was that it provided an opportunity for autonomous writing practice. This presents an image of students seeking out opportunities for extra writing 'homework', by simplifying their conceptualization of the value of free-time writing in response to the TLE on three levels. At the level one, in writing for the forums students valued their right to choose whether or not to participate and that they were not judged for their contribution in terms of '*going for a mark*' (Amy). Yet the value students attributed to writing for the forums extended beyond the freedom to write online in Putonghua, liberated from the watchful eye of the teacher.

At the level two, students showed an awareness of the differences between the challenges associated with constructing an assignment written for their teacher that exists in isolation, and writing for the public arena of virtual space. Students made proactive choices (Littlewood 2009) about their level of participation and whether they wanted to contribute to the ideas coming from responses to the parent thread, suggestive of reactive autonomy (ibid.). They reported that they were attentive to

matters of accuracy. With one eye on their virtual audience, students indicated that writing online encouraged them to self-evaluate and take responsibility for their written output. At the level three, students who had reported that they were less confident speaking in class, showed signs of engaging with online discourse, constructing an argument and expressing themselves more 'freely and spontaneously' (Lantolf 2003: 367), transforming their ideas into the online discussion.

A compelling picture of autonomy above emerges in terms of learners' perceptions, but how about the reality? Free-time online activity observable in the reality was thus presented: the students ignored structural free-time learning tasks and student-led forums in favor of the expert-led RTR forum. One could argue they were simply responding to direction, but on a superficial level, this would suggest that the presence of the expert undermines an individual's capacity for autonomy, overlooking notions of reactive autonomy, where students show their ability to organize resources and work with others to achieve the goals of a given task. On a more profound level, it is a view that overlooks the ecological dynamic of the virtual context and the 'totality of relationships' (van Lier 2004: 3) of the online interplay between learners. In writing for the forum, students not only responded to the themes suggested by the parent thread, but also to the 'voices' of those who had gone before them.

In light of the suggestion that autonomy is not considered to be a 'steady state' (Pemberton 2006: 4), the reality of these students' free-time online activity demonstrates the different levels at which they felt capable of being autonomous from logging into and managing the site in their free-time to reactively engaging with the expert-led RTR forum, demonstrating their proactive capacity to take responsibility, make decisions and exercise control over their learning through independent thought, action and interaction in response to the structure of the TLE. Students' accounts of the value of reading classmates' posts were corroborated by site records, providing

insights into the value of implicit (reading) interaction and an ecological view of autonomy.

7.4.1 The Positivist View: Autonomy led by Design in the Free-time Access

In their free-time, students had access to multiple TLE-mediated resources. Rather than responding to more static resources, students mainly engaged with more dynamic forums, where they were invited to post messages and share ideas for others to read in Putonghua. Writing for the forums expanded their readership to 'an audience of critical peers' (Sotillo 2012: 16). The forums introduced the possibility of virtual interaction between participants, allowing them to expand their use of Putonghua beyond the range of the classroom and providing a new dimension to relationships between classmates.

However, one should not necessarily presume there to be a clear correlation between the students' increased free-time use of Putonghua and the forums. They seldom generated their own threads, rarely replied to one another and predominantly responded to weekly expert-generated threads posted to the RTR forum. Relationships in the forums corresponded to those of the classroom. In virtual space, students' eyes were turned to the front in response to expert-led instruction delivered in the form of the weekly posting, manifesting the same behavior and dynamic between class members as in the TLE blended classroom. But this does not mean that the learners' onsite personal response to the TLE in their free-time was not autonomous, simply because patterns of behavior resembled the conventions of the guided and teacher-led learning model. It could be argued that their response to the TLE reflected the notion of reactive autonomy, as students intellectually engaged with the design intentions of the affordance supported by the facilitative lead provided by the expert.

In their free-time engagement with the TLE, students responded to the forums

and overlooked the more structured ‘workbook’ affordances. Their choices corresponded to their concerns about their lack of opportunity to use the language more freely. From an ecological stance one can argue that students conceptualized the potential of free-time virtual communication mediated by the forums in terms of their language development needs. But they predominantly responded to the direction provided by the weekly expert-generated threads posted to the RTR forum. It could be argued that while students acknowledged their need to use Putonghua more extensively beyond the classroom, they needed a structure within which they might explore their capacity to use the language more freely. Student-led forums provided communication spaces that corresponded to their desire to practice the language, but these spaces lacked definition. In contrast, the expert-led forums provided structured affordances that created an opportunity to engage with ideas cognitively, the language and with one another, suggesting reactive autonomy.

In responding to free-time structural affordances, such as a reading comprehension, the construction of the students’ replies might be considered to be determined by the questions and the text. By contrast, expert-led parent threads to the RTR forum were designed to stimulate ‘internal-cognitive’ (Little 2007: 18) engagement, generating the exchange and development of ideas mediated by online social interaction. Unlike the reading comprehension, responses to the parent thread along the post trail were unpredictable. Learners were invited to freely express their own ideas in Putonghua in their own words, and reported that they valued the opportunity for free expression in Putonghua. However, one can argue that their use of Putonghua was determined by the context, which was defined by the expert-led posting, influencing their choice of register and vocabulary. The technology was the conduit for the design intentions of the affordance. Therefore, learner behavior would not be directly attributable to the technology.

7.4.2 The Constructivist View: Autonomy as a Response to the Technologically Reconfigured Dimensions of the Learning Environment in the Free-time Access

In examining the nature of the relationship between autonomy and technology, caution should be exercised in suggesting that autonomous behavior indicated by the students' personal response to the technology was due to the TLE. This overlooks the transformative effects of introducing the TLE into the learning environment and the subsequent impact on learner behavior. In fact, the TLE reconfigured the temporal and spatial dimensions of learning, not only in the classroom but also by providing free-time online access to different resources and classroom materials. One could argue that this is unremarkable – after all, students can open their course books at home to look back at the day's lessons. However, VLE-mediated functionality not only allowed students to revisit materials, but they could trace the clue left by their classmates, re-reading their thoughts and ideas in response to the *CM* lessons in which the forums had been incorporated in class. This is a dynamic that cannot be replicated by a course book.

The defining characteristic of an online forum is that it provides a context for virtual social discourse, and the ecological notion of 'language as relations between people and the world' (van Lier 2004: 4). A clearly defined pattern of behavior evolved as students engaged in their free time with the TLE. The students: 1) overlooked the structural affordances. 2) Rarely contributed to the student-led forums. 3) Predominantly replied to the weekly expert-generated thread. 4) Rarely generated their own threads. 5) Implicitly acknowledged one another's contributions. Lack of explicit learner responsiveness to one another raise questions about how the right conditions might be created to stimulate online social interaction between learners.

I have indicated that students' online behavior mirrored that of the classroom, as

they listened and responded to pre-set tasks. One should be cautious in suggesting that by predominantly responding to the direction of the expert-led thread, students were oblivious to others in virtual space. In terms of explicit written interaction, the voices of those who post can be 'heard', but it is more difficult to observe those who are 'listening' or reading. Learners widely reported in self-report data an awareness of one another's online presence, expressing surprise at their ideas. They were inspired to contribute by one another's postings, which was corroborated by an analysis of students' postings and their site records. This supports findings from the Kol & Schcolnik's (2008: 60) study where 'students logged into the site and gained a new perspective by reading one another's posts before deciding whether to contribute'. Rather than initiating the direction themselves, suggestive of Littlewood's notion of 'proactive autonomy' (2009: 75), the students' personal autonomous response to their TLE experience was characterized by a preference for direction indicative of reactive autonomy (ibid.).

In terms of autonomy, from an ecological stance, the individual detects, interprets and acts upon affordances within his environment through a process of evaluation and deciding on whether he believes it is worth doing. Students responded to affordances that corresponded to their desire to use Putonghua more communicatively that were specific to the technology. However, the forums uniquely provided a context in which students could not only practice Putonghua and express their own ideas, but share their views with a wider audience in Putonghua unlike an assignment. The forums provided an environment that signaled an opportunity for proactive or reactive 'action potential' (van Lier 2004: 92). Rather than setting the pace in student-led forums, students preferred to be guided by a weekly expert-generated thread, perhaps because they were accustomed to direction in their classroom learning environment. But one could argue that they were proactive,

weighing up the pros and cons and choosing to overlook student-led forums. After all with access to their own social networking sites there was no identified need and they saw one another every day in class. These learners responded to the TLE-mediated affordances that corresponded most closely to the aspect of language development that concerned them most.

According to the ecological approach, it is suggested that the characteristics of the context define the language used, but that the language used also defines the character of the context. One could argue that the students' free-time use of language in the expert-led forum was not only influenced by the direction set by the task but also affected by the context, suggesting a reactive rather than proactive view of autonomy. Learners' initial call to action was stimulated by the task, but there were indications that the trail of forum-mediated ideas was uniquely characterized by the 'architecture of electronic spaces' (Hawisher & Selfe 2001: 60), encouraging a 'more egalitarian sense of authorship' (Blake 2008: 134). Unlike classroom interaction, asynchronous communication creates a context where students can write for a wider audience, where everyone has a voice, with the time and space to engage with opinions which help in the development of ideas, as well as revisiting, selecting and re-reading posts.

Thematic analysis of students' postings reveals that their thinking was influenced by ideas and language that had gone before, indicating their responsiveness to one another's online presence. The rubric of the tasks stimulated the initial direction learners took, but did not govern the interaction. The dynamics of online interaction were anchored and set in motion by the task, but the learners individually and cognitively interpreted the ideas expressed by others, suggesting that the 'totality of relationships' (van Lier 2004: 3) shaped the emerging web of interaction. The other element to consider is that the language used and contributions made by the students

characterized and defined the character of the expert-led forum which evolved during the *CM* programme. Expert-led parent threads were designed to challenge the students intellectually, encouraging them to go beyond the construction of formulaic responses, exploring the idea that technology can be used to focus the learners' attention, activating cognitive and metacognitive learning strategies.

7.4.3 The Eclectic View: The Development of Autonomous Behavior Drawing on Positivist and Constructivist Approached in the Free-time Access

In their free time the students responded to affordances designed to stimulate online peer interaction, replying predominantly to expert-generated threads and without explicit reference to one another. The students may simply have reacted to the expert, the task and not the technology. Yet the virtuality of the forum transformed the temporal and spatial dimensions of student writing, slowing down the pace of the interaction, allowing 'greater opportunity to attend to and reflect on form and content of communication' (Kern & Warschauer 2000: 15), creating the necessary 'time and psychological space' (Little 2000: 17) to cognitively engage with ideas generated by others. From the eclectic perspective, the guidance provided by TLE-mediated content created a structure and anchored the task which provided a reason for students to engage with their peers in Putonghua. However, the technology reconfigured the 'totality of relationships' (van Lier 2004: 3) between elements in the learning environment, affecting the social dynamic in terms of how students engaged with one another and the extent to which they felt capable of autonomy and free expression in Putonghua.

One might argue that by choosing to log in and engage and interact with the TLE in their free time, students manifested signs of proactive autonomy. But their online activity was predominantly generated in response to the direction mediated by the

expert-generated threads posted to the RTR forum. They engaged with both the affordance and the unique characteristics of the forum created by the dynamic of this virtual space where they could read and respond to ideas presented by others, practicing the language beyond the classroom. In sum, from an eclectic viewpoint, students responded to the structure created by the expert-generated thread, but the virtual configuration of the forum transformed and enhanced their experience.

The TLE created a space within which these learners felt able to explore and contribute their own ideas in response to the guidance provided by the affordance and the voices of others, in other words an ecological perspective of autonomy. In doing so, it does not overlook the impact of the technology on the affordance relative to the reconfiguration of the classroom and the transformation of ideas in the forum thread. An ecological view of autonomy adds shape to the notion of interconnectedness between the internal-cognitive and external-social dimensions of the construct by acknowledging the sense that 'everything is connected to everything else' (Lantolf 2000: 25). Ecological autonomy emerges as a socially interactive web of individually constructed ideas stimulated and anchored by TLE-mediated affordances.

7.5 Summary of the Students' Response

We actually found that different types of learner autonomy existed in the students' response towards a technologically mediated Putonghua programme, which should be discussed in the next section. Table 7.2 compares and summarizes the students' response in relation to learner autonomy in two different strands.

Table 7.2 Students' respective response in the blended lessons and free-time strand

	Students' Response

Blended Classroom	**Positivist view**: students valued learning opportunities created by the design and content of the lesson (the first session of *CM* lessons).
	Constructivist view: students did not feel the pressure from the teacher and were more actively involved, making their own choices and deciding the direction of peer interaction (the second session of *CM* lessons).
	Eclectic view: students valued the communicative freedoms created by the transformation from the linear and teacher-led classroom towards a more egalitarian environment.
Free-time Strand	**Positivist view**: students predominantly responded to weekly expert-generated threads posted to the RTR forum.
	Constructivist view: students rarely contributed to the student-led forums and rarely generated their own threads.
	Eclectic view: the guidance provided by TLE-mediated content created a structure and anchored the task which provided a reason for students to engage with their peers in Putonghua.

7.6 Towards a Representation of the Relationship between Autonomy and Technology

After gaining a clear understanding of students' response, including their perceptions and reality, in the blended classroom and free-time strand respectively, what is the nature of the relationship between autonomy and technology within a technologically-

mediated Putonghua programme? This question points to two directions in identifying how technology might be exploited in order to encourage autonomous learner behavior. The *first direction* lies in capturing the essence of what autonomy represents, and therefore understanding what is required so that we might create the conditions to stimulate such behavior. According to Holec (1981: 3), learner autonomy is broadly defined as 'the ability to take charge of one's own learning', which can be viewed in terms of Littlewood's (2009) distinction between proactive (more learner-controlled) autonomy and reactive (more teacher-controlled) autonomy.

7.6.1 Reactive Autonomy vs. Proactive Autonomy

In the blended lessons, from the positivist view, the teacher delivered her teaching by using an overhead projector in the classroom, where interactions were more linear, guided and mediated predominantly. Because of the presence of the teacher, some students liked the 'coercive nature' and valued learning opportunities created by the design and content of the *CM* lessons. By design, they were also guided towards an increased use of Putonghua. This suggests that learners can express their potential for autonomy by 'reactively' responding to externally created conditions through the selection of appropriate materials, supporting them and allowing autonomy to flourish.

From the constructivist view, shyer students felt more confident in their second session of *CM* lessons in the computer room because of the reconfiguration of the private space. With the decentralization of learning away from the teacher, students were willing to make their own choices more 'actively' and deciding the direction of peer interaction, rather than following the lead of the teacher.

From an eclectic view, the introduction of the TLE created the necessary conditions for students to explore their potential for autonomy, by providing materials

to which they could respond that corresponded to their expectations and experiences of language learning. In doing so, the dimensions of their learning environment were configured by the technology, influencing their response to the activities.

In the free-time strand, from the positivist view, students predominantly responded to the direction provided by the weekly expert-generated threads posted to the RTR forum. It could be argued that while students acknowledged their need to use Putonghua more extensively beyond the classroom, they needed a structure within which they might explore their capacity to use the language more freely. The expert-led forums provided structured affordances that created an opportunity to engage with ideas cognitively, the language and with one another, suggesting reactive autonomy.

From the constructivist view, while predominantly responding to the direction of the expert-led thread, students were proactive to weigh up the pros and cons and chose to overlook student-led forums. It is evident that students preferred to be guided by a weekly expert-generated thread, perhaps because they were accustomed to direction in their classroom learning environment.

From an eclectic view, on the one hand, by choosing to log in and engage and interact with the TLE, students manifested signs of proactive autonomy. On the other hand, their online activity was predominantly generated in response to the direction mediated by the expert-generated threads posted to the RTR forum, which indicates signs of reactive autonomy. Table 7.3 illustrates the students' response in relation to learner autonomy within two strands:

Table 7.3 Students' response in relation to learner autonomy

	Students' Response	**Learner Autonomy**
Blended Classroom	**Positivist view**: students	**Reactive autonomy**:

	valued learning opportunities created by the design and content of the lesson in the first session of *CM* lessons.	learners can express their potential for autonomy by reactively responding to externally created conditions.
	Constructivist view: students did not feel the pressure from the teacher and were more actively involved, making their own choices and deciding the direction of peer interaction in the second session of *CM* lessons.	**Proactive autonomy**: an increased perception of learner *agency* was created by the opportunity to check information, as students could move freely between screens and the internet.
	Eclectic view: students valued the communicative freedoms created by the transformation from the linear and teacher-led classroom towards a more egalitarian environment.	**Proactive and reactive autonomy**: learners acknowledged that the reconfiguration of the learning environment brought by the technology.
Free-time Strand	**Positivist view**: students predominantly responded to weekly expert-generated threads posted to the RTR forum.	**Reactive autonomy**: students intellectually engaged with the design intentions of the affordance provided by the expert.

	Constructivist view: students rarely contributed to the student-led forums and rarely generated their own threads.	**Proactive autonomy**: students chose to overlook student-led forums after weighing up the pros and cons.
	Eclectic view: the guidance provided by TLE-mediated content created a structure and anchored the task which provided a reason for students to engage with their peers in Putonghua.	**Proactive and reactive autonomy**: students could read and respond to ideas presented by others, actively responding to the structure created by the expert-generated thread.

7.6.2 Individual Autonomy vs. Group Autonomy

In addition, the issue of autonomy in groups cannot be ignored. Some might argue that learning is something which happens at least partly in individual persons, and autonomy is thus associated with certain individual qualities and skills, which might be limited or constrained more or less in a group. In fact, in accordance with Banker et al. (1996, cited in Langfred 2000: 4), autonomy in groups can be conceptualized along a continuum (see Figure 7.1), which suggests that group autonomy does not preclude individual autonomy. In the traditional group (type 0), there is no autonomy at either the group level or the individual level. Type 1 indicates the combination of high group autonomy and low individual autonomy; while type 2 presents low group autonomy and high individual autonomy. The final type 3 incorporates both high

group autonomy and high individual autonomy.

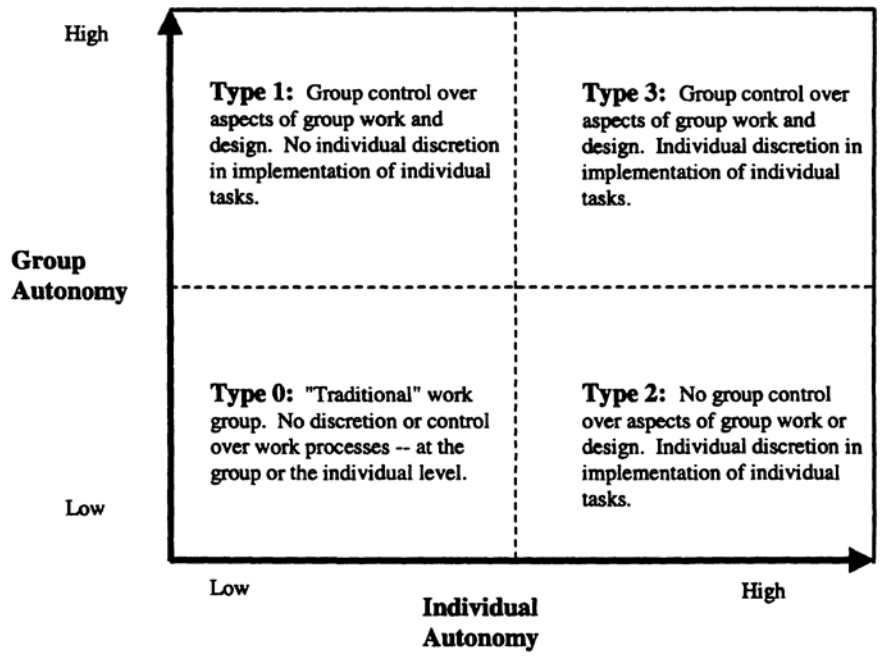

Figure 7.1 Types of autonomy in groups (Banker et al. 1996)

Autonomy in groups, therefore, has become increasingly important to researchers in recent years (Guzzo and Dickson 1996). Nonetheless, the fact that autonomy can simultaneously reside at both the group and the individual level is still neglected. For example, a group may have considerable control in taking charge of their group tasks and deciding how to conduct them, but individual members within the group may have very little control over their tasks, or vice versa. It is worth noting that the group autonomy is not the aggregation of individual autonomy to the group level, but the extent of control and discretion the group is allowed in carrying out tasks and a purely group-level construct. According to Langfred (2000), three important elements are found within the group autonomy: 1) Autonomy at the group level focuses on the group as a unit, thereby increasing attention of the perceived group identity and group membership. 2) Autonomy at the group level also increases

the salience of the external environment to group members. 3) There will be more interaction between group members. By contrast, individual autonomy means the reduction in interpersonal interaction that is associated with group cohesiveness. In other words, individual autonomy requires more individual freedom and control, cohesiveness in a group often implies the opposite.

In line with this, in the blended lessons, from the positivist view, students felt more capable of expressing personally constructed topic-based ideas in response to *CM* lessons in the first session. However, linguistic behavior in *CM* lessons was guided by the conventions of the classroom context with learners attending carefully, taking notes and mindful of following up assignments. In other words, students respond indirectly to their classmates and are directed towards the teacher, who interprets and redirects interaction back to the class. Therefore, there is no direct and intensive interaction between group members, which is inconsistent with the third element of group autonomy. Yet, students still responded to the transparency of the TLE affordances and felt encouraged to express independently constructed ideas, rather than '*giving the answer that the course book requires*' (Simon), which indicates a high level of individual autonomy.

From the constructivist view, the presence of the terminals in the computer room created a private space between partners and peer interaction in Putonghua became more accessible for shyer learners than the wide open space of the classroom in the first session. As the teacher stands aside, interactions are peer-led instead of teacher-led. Students interact directly to the ideas and language presented by their classmates rather than mediated by their teacher. More importantly, the context created by the technology generates an intimacy between student pairings, allowing them time to '*talk and express our ideas'* (Kai). It suggests that more interaction directly happens between group members, reflecting a high level of group autonomy.

From an eclectic view, on the one hand, the introduction of the TLE created the necessary conditions for students to explore their potential for individual autonomy, by providing materials to which they could respond that corresponded to their expectations and experiences of language learning. On the other hand, the dimensions of their learning environment were configured by the technology, influencing their response to the activities, allowing more interaction between group members.

In the free-time strand, from the positivist view, students were invited to freely express their own ideas in Putonghua in their own words, by predominantly responding to the direction provided by the weekly expert-generated threads posted to the RTR forum. The expert-led forums provided structured affordances that created an opportunity to engage with ideas cognitively, suggesting a high level of individual autonomy.

From the constructivist view, rather than setting the pace in student-led forums, students preferred to be guided by a weekly expert-generated thread, perhaps because they were accustomed to direction in their classroom learning environment. In terms of explicit interaction, however, asynchronous communication creates a context where students can write for a wider audience, where everyone has a voice, with the time and space to engage with opinions which help in the development of ideas, as well as revisiting, selecting and re-reading posts. This supports findings from the Kol & Schcolnik's (2008: 60) study where 'students logged into the site and gained a new perspective by reading one another's posts before deciding whether to contribute'. A TLE consequently could be viewed a unit, which corroborates with the first element of group autonomy.

From an eclectic view, by responding to the structure created by the expert-generated thread, students manifested high signs of individual autonomy. But their online activity was partly generated in response to the direction mediated by the

student-generated threads, even though they intended to ignore them. They engaged with both the affordance and the unique characteristics of the forum created by the dynamic of this virtual space as a unit, where they could read and respond to ideas presented by others, practicing the language beyond the classroom, manifesting high signs of group autonomy. Table 7.4 summarizes the students' response in relation to autonomy in groups within two strands:

Table 7.4 Students' response in relation to autonomy in groups

	Students' Response	**Autonomy in Groups**
Blended Classroom	**Positivist view**: students valued learning opportunities created by the design and content of the lesson in the first session of *CM* lessons.	**High individual autonomy**: students respond indirectly to their classmates and there is no direct and intensive interaction between group members.
	Constructivist view: students did not feel the pressure from the teacher and were more actively involved, making their own choices and deciding the direction of peer interaction in the second session of *CM* lessons.	**High group autonomy**: students interact directly to the ideas and language presented by their classmates rather than mediated by their teacher.
	Eclectic view: students valued	**Type 3 (high group**

	the communicative freedoms created by the transformation from the linear and teacher-led classroom towards a more egalitarian environment.	**autonomy + high individual autonomy**): the introduction of the TLE created the necessary conditions for students to explore their potential for individual autonomy, simultaneously allowing more interaction between group members.
Free-time Strand	**Positivist view**: students predominantly responded to weekly expert-generated threads posted to the RTR forum.	**High individual autonomy**: student could freely express their own ideas in Putonghua in their own words.
	Constructivist view: students rarely contributed to the student-led forums and rarely generated their own threads.	**High group autonomy**: as a unit, TLE allows everyone has a voice.
	Eclectic view: the guidance provided by TLE-mediated content created a structure and anchored the task which provided a reason for students to engage with their peers in	**Type 3 (high group autonomy + high individual autonomy)**: students engaged with both the affordance and the unique characteristics

	Putonghua.	of the forum created by the dynamic of this virtual space as a unit, where they predominantly responded to the structure created by the expert-generated thread.

7.6.3 The impact of technology

As mentioned earlier, an ecological view of autonomy connects the cognitive with the social processes of interaction where language and learning are seen as constituting a relationship between learners within their environment. Ecological autonomy embraces the unpredictability of interaction between participants in a social context, in which individual elements are not considered in isolation but as contributory factors to the wider discourse in the classroom or online. Along this line, the *second direction* relates to understanding the impact of technology on the dynamic of the learning environment, taking into account the view that students do not simply respond to the materials with which they are provided, but also to the effect of those materials on the environment, because they are 'the creative products of their social discourse' (Esch 2009: 43). Technological functionality creates opportunities for us to observe and examine the intangible autonomy. In doing so it becomes possible to gain more profound insights into the construct and to scrutinize the nature of the relationship between autonomy and technology.

I propose a representation of the relationship between autonomy and technology that is divided into two parts. The first part draws on Little's (2000: 7) view that

‘independence is always balanced by dependence’ and that ‘there must be a learning structure in which control over the learning can be exercised by the learner’ (Holec 1981: 7). The provision of a well-resourced technological environment mediates the potential for proactive and reactive autonomy, but this is no guarantee of success and may not stimulate autonomous behavior. The relationship between autonomy and technology is more profound than the provision of pedagogically well-considered tasks mediated by a technological platform. The design intentions of TLE content are clearly an important element, but considered in isolation reveal little about the nature of the impact of the technology on the learners’ autonomous behavior, failing to address the effect of introducing the TLE on learners’ experience. Introducing technology materially transforms the configuration of the learners’ environment, leading to the second component of the representation.

The second part of the representation asserts that the TLE introduces a virtual element that is crucial to a technological context. The virtual element transforms the structure of the learning environment. For instance, by altering the dimensions of affordances for learning, students’ responses to one another and their patterns of language use are affected and changed. Students might respond proactively to learning opportunities mediated by the TLE or reactively to the direction stipulated by the activity. But it is the virtual element that takes the learner beyond the rubric of the task, enhancing and adding a dimension beyond that which is provided by the printed page. The virtual element highlights the possibility of an ecological version of autonomy, characterized by the significance of the idea of the ‘totality of relationships’ (van Lier 2004: 3), expanding the notion of interconnectedness between internal-cognitive and social-interactive elements in a blended or free-time virtual learning context. The dynamic of learning are set in motion and grounded by the affordance, stimulating autonomy that emerges as a responsive state, and defined as

an unpredictable web of human interaction, as ideas are transformed and passed between those engaged with the activity.

7.7 Conclusion

The chapter started with discussions of a framework for autonomous learning behaviour in a TLE, in which three approaches in relation to positivist, constructivist and eclectic stance were scrutinized. The chapter then summarized the students' respective perceptions and reality in the blended classroom and in their free-time. These findings were analyzed from the positivist, constructivist and eclectic approaches relative to three dimensions of an ecological perspective: affordance; 'totality of relationships' (van Lier 2004: 3); and language. During the process, three significant aspects of the students' response: response to direction; response to the environment; and response to direction and the environment, in relation to reactive and proactive autonomy, individual and group autonomy, were further presented clearly. The chapter ended with a summary towards a representation of the relationship between autonomy and technology in the context of language learning.

Chapter 8 Conclusion

8.1 Introduction

In this chapter, answers to two research questions, in relation to three specific questions, are summarized. Then the major contributions of the study are presented and the implications, limitations and recommendations for further research are suggested. The chapter ends with final concluding remarks.

8.2 Answers to research questions

In this section, answer to the first research question is presented by illustrating further three specific questions. Drawing on them the second research question is then examined.

SRQ1: What were the students' perceptions and experiences of learning Putonghua with technology before the introduction of the TLE?

Before the introduction of the BLE, students' views corresponded with their concerns that they had limited opportunities to use Putonghua outside the classroom and that their classroom represented their sole target language community. Yet they expressed a reluctance to use Putonghua in class, except with the teacher, and only fleetingly with one another, reporting that they felt inhibited by the external constraints of the syllabus and the more transmissive teaching style of their learning environment.

Students' thoughts about technology in isolation were task-based and engagement limited to interactions between students and computers. Neither the technology nor the language was conceptualized as part of the environment within which both exist. In other words, the students indicated that they predominantly conceptualized language learning with technology in terms of functionality and that

online interaction with friends was not ‘real’ language learning.

SRQ2: What were the students’ personal responses to the TLE in their blended lessons?

Students valued the added dimension the technology brought to their lessons. For instance, hyperlinks embedded into the TLE facilitated the opportunity to move easily between screens to check information. The experience was enriched further as students reflected on the value of using the internet to find more information about topics covered in the lesson leading into lively classroom discussions. Technology also introduced a virtual dimension, extending the boundaries of the lesson beyond the dimensions of the ‘page’ to the world-wide web, emerging as a component with the potential to enhance the notion of interconnectedness between internal and external dimensions of autonomy.

The students’ assignments and forum posts shared thematic patterns and different ideas were re-emerged and expressed in their writing as well as their classmates’ writing. Site records reveal something of the dynamic of the online activity in class. Students responded to increased levels of responsibility, choosing to stay on track and follow the flow of the lesson, corroborating the self-report data. Students claimed that blended lessons enhanced their learning experience, bringing a new dimension to their classroom.

The students’ personal response to the TLE is suggestive of Littlewood’s (2009: 75) notion of proactive and reactive autonomy in terms of taking responsibility for independent thought, action and interaction grounded within a social structure in response to their TLE blended-lesson experience. It could be argued that autonomy might be a response to the technologically mediated learning environment. Alternatively, students may have a simple response to the direction caused by the

screen-mediated stimuli, and even the same materials mediated by a course book would generate the same response.

However, one should not overlook the interconnectedness between elements in the technologically mediated learning environment and the impact of the 'totality of relationships' (van Lier 2004: 3) on the dynamic of the learning environment. Evaluation of learners' personal response to the TLE revealed the communicative dynamic to be anchored by the direction indicated by the TLE-mediated affordance, stimulating a trail of internal-cognitive thinking in a socially interactive context. Topics were transformed by students weaving their opinions into the debate and the notion of an ecological view of autonomy emerges, defined by the unpredictable exchange of ideas between contributors.

SRQ3: What were the students' personal responses to the TLE in their free time?

The students perceived that the value of their free-time participation with *CM* was that it provided an opportunity for autonomous writing practice in terms of three levels: reactively responding to expert-generated threads; reactively responding directly to peer-generated threads; proactively generating own threads. Free-time online activity observable in the reality was that students ignored structural free-time learning tasks and student-led forums in favor of the expert-led RTR forum.

One could argue they were simply responding to direction but on a superficial level, this would suggest that the presence of the expert undermines an individual's capacity for autonomy, overlooking notions of reactive autonomy, where students show their ability to organize resources and work with others to achieve the goals of a given task. On a more profound level, it is a view that overlooks the ecological dynamic of the virtual context and the 'totality of relationships' (van Lier 2004: 3). In writing for the forum, students not only responded to the themes suggested by the

parent thread, but also to the ‘voices’ of those who had gone before them.

In light of the suggestion that autonomy is not considered to be a ‘steady state’ (Pemberton 2006: 4), the reality of these students’ free-time online activity demonstrates the different levels at which they felt capable of being autonomous from logging into and managing the site in their free-time to reactively engaging with the expert-led RTR forum, demonstrating their proactive capacity to take responsibility, make decisions and exercise control over their learning through independent thought, action and interaction in response to the structure of the TLE. Students’ accounts of the value of reading classmates’ posts were corroborated by site records, providing insights into the value of implicit (reading) interaction and an ecological view of autonomy.

RQ2: What is the nature of the relationship between autonomy and technology within a technologically mediated Putonghua programme?

The relationship between autonomy and technologically mediated learning could be conceptualized as follows: 1) Learners have the potential for autonomous behaviour in technologically mediated contexts. 2) There is no guarantee that autonomous behavior will happen naturally, even though the provision of a well-resourced technological environment mediates potential proactive and reactive autonomy. Therefore, both technological design and learners’ personal responses need to be taken into consideration when discussing the relationship between autonomy and technology. 3) The technological elements change the configuration of the learning environment, in which the students’ affordances for learning and use of language are affected.

8.3 Major Contributions: Theoretical, Methodological and Pedagogical Insights

8.3.1 Theoretical Insights

This present research introduces an ecological approach to studying the nature of the relationship between autonomy and technology, through exploring how the introduction of technology transforms the affordances of a learning environment and influences the totality of relationships in that environment. After capturing a variety of instances of autonomy, a framework of autonomous learning behavior adopted in the study can conceptualize that a learning environment actually involves different activity space where learning takes place. Each activity space contains a variety of resources and constraints that influence the relationship between individuals. Distinguished from some empirical researches focus on a simple causal link between technology and learning, the study advocates that the introduction of technology may reconfigure the social dynamics of the activity space and change the totality of relationships between individuals and the affordances they appropriate in the activity space, which requires a focus on ecological autonomy.

For example, in the study, ecological autonomy is placed in the context of a TLE, by acknowledging the dynamic connectivity between elements that contribute to events as they unfold in the learning environment. Put another way, the notion of TLE-mediated ecological autonomy is anchored by the structure of the affordance, whether in the blended lesson or a forum thread. Unlike some studies focus on simplistic linear relations between autonomy and technology, ecological autonomy is viewed a dynamic state that has the potential to be transformed by the learners' personal and cognitive response to ideas and the unpredictable web of social interaction, as individuals reflect and construct a response to the voices of those around them.

Simultaneously, the study also admits there is no guarantee that autonomous behavior will happen naturally, even though the provision of a well-resourced

technological environment mediates potential proactive and reactive autonomy. Therefore, both technological and non-technological elements need to be reconsidered when discussing the relationship between autonomy and technology. As a result, adopting an ecological perspective on autonomous language learning requires a focus on learners' responses to create and perceive the affordances, from a participant/insider perspective, which will be discussed in the next section.

8.3.2 Methodological Insights

This study gives primary attention to learners' perspective on the relationship between autonomy and technology, through a close examination of students' response towards a technologically mediated Putonghua programme, and thus contributes to the understanding of autonomy from an insider perspective which has been researched insufficiently. For instance, there has been a lack of empirical research on how participants/insiders themselves perceive and act upon those opportunities for autonomy and how their personal responses are relevant to autonomy. A learner-oriented research approach adopted in this study can help to understand if a gap is existed between learners' perceptions and actions (e.g. their awareness of own responsibility and the expectation of teachers' control in the first session of *CM* lessons). Therefore, the in-depth exploration into students' personal responses towards the direction, the environment, the direction and environment together, have generated new insights into the nature of the relationship between autonomy and technology within a technological learning environment.

8.3.3 Pedagogical Insights

If, as educators, we hope to exploit and maximize the potential of technology as a means by which we can encourage our learners to be autonomous, we should do so

from a basis of improved understanding about the nature of the relationship between technology and autonomy, so what pedagogical insights can be drawn? The study thus suggests four conditions necessary as a means of informing and guiding educators towards an improved understanding. The first condition is:

1. A more robust understanding of the conceptual complexities of what it means to be an autonomous learner so that educators can recognize, build upon, respond to, create and evaluate opportunities for autonomous learning using technology.

Considering the significance attributed by Holec (1981) to the need for structure within which the learner can express his capacity for autonomy, the second condition is that it depends upon:

2. The provision of a clearly defined virtual structure with a transparency of purpose, within which individuals can express their innate capacity for autonomy. A virtual structure can:

- Mediate activities to which learners can respond in class or online.
- Reconfigure classroom space within which learners can make choices, interact and engage in the target language.
- Provide a virtual space within which learners can engage and collaborate.
- Acknowledge the ‘essential human need to interact with others’ (Pemberton 2006: 3)

In isolation, the provision of a resource-rich virtual structure will not necessarily trigger the ‘desired’ response, as learners respond to some affordances but overlook others. In working towards a more profound understanding of the nature of relationship between autonomy and technology, the third condition incorporates the notion of interconnectedness and the interplay between the internal cognitive (i.e. the

individual) and external social and physical (i.e. the structure) dimensions of autonomy.

3. Learners perceive, value and act upon opportunities for learning and development embedded within the structure that they identify as corresponding to personal language and development needs, according to their 'understanding of what is valuable and worth doing' (Wall 2003: 307), and overlook those opportunities they perceive to be less helpful. Technological affordances may lie dormant, but this is not to say they have no potential value. Learners will turn to an affordance, if it corresponds to a personally identified development need.

These three conditions above do not explicitly address the significance of the virtual dimensions brought to the learning environment by introducing the technology, and with this in mind I turn to the final condition:

4. The technology introduces a virtual component that ecologically has the potential to transform the dimensions of the learning environment, altering the internal-cognitive/social-interactive dynamic of human interaction as students selectively engage with screen-mediated affordances and the virtual structure.

If we are to create the appropriate conditions in a technological learning environment that allow learners to express their potential capacity for autonomous behavior, there is a need to raise awareness that the introduction of a TLE has an ecologically transformative effect on the learning environment and learners' responses. In looking beyond matters of whether technology improves learning, the challenge for teachers, teacher educators, materials designers and software developers lies in recognizing, understanding and harnessing the pedagogical value that might be achieved from the transformative effects of the digitalized learning environment.

In the light of the fourth condition, Table 8.1 suggests the ways in which using a TLE for blended learning and free-time access can be physically, communicatively and virtually transformative. Improved awareness of the transformative implications (column two) of introducing a TLE will serve to inform educators about the development of best practice, materials writing and design so that we might create the right conditions in a technological learning environment for the autonomous learner to thrive.

Table 8.1 Implication of the transformative qualities of a TLE on the learning experience

Modes of transformation	**Transformative implications of blended TLE learning and free-time use of the TLE**
Physically transformative (proactive autonomy, Littlewood 2009: 75)	**Individual terminals in the computer room** (the second session of *CM* blended lessons) ● Increased learner responsibility in class ● Provision of private space between students in class
	TLE access beyond the classroom ● Course management – provision of online resources ● Responsibility to take charge of free-time learning

	● Increased choice in selecting and engaging with online affordance ● Exchange of information between school and home in terms of: access to homework; writing and submitting assignments; marking and returning assignments
Communicatively transformative (reactive autonomy, ibid.)	**Explicit interaction in blended classroom** – *speaking* in response to: ● TLE-mediated stimuli ● Classmates' response to TLE-mediated stimuli
	Explicit interaction online – *writing* in response to: ● TLE-mediated content in blended lessons (assignments, classroom writing) ● Parent threads in TLE forum ● Ideas expressed by others in reply to parent threads ● Course management
	Implicit interaction in blended classroom – *listening and reflection*: ● classmates and teacher's response

	to TLE-mediated content
	Implicit interaction online – *reading* in response to: ● TLE-mediated content ● TLE-mediated additional resources ● TLE-mediated forums ● The internet
Virtually transformative (proactive and reactive autonomy, ibid.)	**TLE blended classroom** ● TLE hyperlinks in terms of: alters the pace of lesson; smooth transition to and between TLE-embedded resources ● Internet-mediated access to information beyond the course book
	Free-time access ● Technologically mediated access to lessons, online affordances ● Multiple levels of social interaction in terms of: between tutors and students; responding and contributing to an online community; awareness of the responsibilities associated with the potential to influence other's

	thinking

8.4 Implications of the Study

Conceptually autonomy is a complex and multidimensional notion and theorists warn against the 'uncritical enthusiasm' (Hawisher & Selfe 2000: 56) for educational technologies. If we are to exploit technology so that our learners might realize their capacity for autonomy, simply creating a platform packed with teaching and learning activities and technological functionality is no guarantee of success. In our desire to partner autonomy, technology and language learning, there has been a tendency to overlook the interconnectedness between the internal and external dimensions of autonomy as well as the sense that autonomy is relative to the social-cultural context within which the individual and the technology exist. We need to look beyond our view of the union between technology as the cause and autonomy as the effect and expand our breadth of vision. From this perspective, it is not only that the learner should have the capacity to take charge of his learning, but that the learning structure should be constructed to enable the learner to exercise his capacity to take charge of his learning. In this section, I will present four major implications of this research.

First of all, it is no doubt that the promotion of autonomous language learning is difficult for both the educators and the learners in the educational process. To achieve an optimal result, learning should not be considered a problem only for the educators. By highlighting the students' response from a learner perspective in the programme designed, the present study attempts to indicate the relationship between students' response and learner autonomy. However, it is short-sighted to suggest that these learners simply responded to the direction suggested by screen-mediated activities and that instances of autonomy were unrelated to the technology. This overlooks the

implications of context in shaping students' personal response to experience.

Equally, it is too restrictive to suggest that autonomy emerged as a response to the virtual dynamic of the TLE, altering the dimensions of learner behaviour, thereby liberating the individual from the constraints of the classroom and extending learning and language opportunities into the students' free time. In fact, the findings in the study suggests that the students showed a high level of individual autonomy, accompanying with a gradual change from reactive to proactive autonomy, in accordance with their respective response towards the direction, the environment, the direction and environment together. This understanding reminds considerably educators what should be done concerning the development of learner autonomy, in line with the learners' needs.

Secondly, this present research also provides additional evidence with respect to how technological learning environments should give students the opportunity to think critically and explore their potentials for autonomy. More flexible arrangement of terminals in the computer room, for instance, means that a TLE gives students the space and freedom to choose their preferred learning topics and content depending on their own evaluation of their abilities and interests. Moreover, the educators should try to establish mutual trust with the learners in a TLE, through changing their role from a provider of the information into an efficient coordinator, who could transofrm traditional language learning classrooms into a more self-reliant environment.

Thirdly, in seeking fresh insights into the nature of the relationship between autonomy and technology, the study questions the understanding of the suggestion that technology creates opportunities that 'encourage students to strive for autonomy in the target language' (Kessler 2009: 79) and that 'educational technology demonstrates its effectiveness as a purveyor of learner autonomy' (Murray 2009: 296), by expanding upon Little's (2000: 7) notion of 'interconnectedness and the

reciprocity between internal cognition and social interaction' and argue for an ecological version of autonomy. Three aspects relative to these students' personal response to the introduction of a TLE to support language learning, as indicated in Table 8.2, is thus summarized:

Table 8.2 Summary of three aspects relative to the students' personal response to the introduction of a TLE

1. Learners have the potential for autonomous behavior in the context of a TLE.
2. In the light of Holec's (1981) condition that there should be a structure within which the learner can express his capacity for autonomy:

- Learners can express their capacity for autonomous behavior in the context of a TLE in response to the structure and design intentions of technologically mediated stimuli rather than as a response to the functionality of the technology.
- The TLE structure creates a space within which the individual can exercise control over his learning and use of the target language.

3. The TLE structure introduces a virtual component, transforming the ecology of the learning environment and the learners' personal response to the technology reveals instances of autonomous behavior in terms of:

- Proactive autonomy where the students take charge of their own learning and direct activity (Littlewood 2009: 75)
- Reactive autonomy where the students respond to direction, working with others to complete the task (ibid.)
- TLE-mediated affordances enhance learners' choice, freedom to choose and responsibility.

- Networks of relationships in blended lessons and online ‘totality of relationships’ (van Lier 2004: 3).
- Implicit (reading and listening) and explicit interaction (writing and speaking) in which language is defined by the task but equally, the language used by those who respond to the task define the context in which the interaction takes place (ibid.).

The three aspects add a virtual dimension to Holec’s (1981) view of autonomy and reinforce Little’s (2000) notion of interconnectedness between the individual and the context within which he exists. But significantly they acknowledge the implications of the transformative qualities brought to the learning experience by the introduction of a TLE, and an ecological version of autonomy with technology.

Last but not least, the study presents within a TLE the students viewed the learner autonomy concept in a positive way and stated that the introduction of technology played a major role as a learning tool for promoting autonomy and self-development. As a result, there are clear implications for the effective design and integration of technology in language learning in promoting autonomy. The present study makes several noteworthy contributions that we not only need to understand how the students conceptualize the value of technology relative to notions of autonomy, but consider how their perceptions correspond to the reality of their online activity. In so doing it becomes possible to gain more profound insights into the nature of the relationship between autonomy and technology, which in turn has the potential to inform the development of content, platform design and technological functionality so that they might deliver their ‘intended benefits’ (Esch 2009: 31).

The study thus proposes that the nature of the relationship between autonomy

and technology is a combination of the learners' response to the design intentions of screen-mediated activities, as well as a response to the transformation brought to the learning environment by introducing the technology. It seems that technology can be successfully exploited to encourage students to deploy cognitive and metacognitive learning strategies, helping them to conceptualize new ideas and information.

8.5 Limitations and Recommendations for Further Research

However, this present research was small in scale and highly qualitative, preventing us from making generalizations about the wider population and other stakeholders. It shows how a group of Cantonese-speaking Putonghua learners from one institution responded to the introduction of a TLE in the context of a language-learning programme. Nevertheless, it has revealed fresh insights into the nature of the relationship between autonomy and technology, making recommendations about how it might be possible to create the conditions necessary for autonomy to flourish in a technologically mediated language learning environment.

Mindful of the scale of this study, I would therefore propose the following recommendations for further study in order to improve and validate insights identified in the study. Table 8.3 proposes suggested models of studies that might be designed to pursue similar objectives and to expand upon the findings from this study, using different permutations of case samples.

Table 8.3 Recommendations for further research

Types of study	**Target learners**	**Native language of learners**	**Target language to learn**	**Institution**

Study one (this study)	HK-based Chinese	Cantonese	Putonghua	Tertiary institution
Study two	HK-based non-Chinese	English	Putonghua	Vocational institution
Study three	HK-based non-Chinese	Other languages	Putonghua	Residential community
Study four	HK-based Chinese	Putonghua	Cantonese	Tertiary institution
Study five	HK-based non-Chinese	English	Cantonese	Vocational institution
Study six	HK-based Chinese	Cantonese	English	Tertiary institution

Study one represents the current research, in which a cluster of Cantonese-speaking learners attempts to learn Putonghua in a tertiary institution. Study two means that a group of English-speaking learners might seek learning Putonghua in a vocational institution. They might be some foreign transients who work in Hong Kong and hope to learn Putonghua for the practical purpose. Study three presents us another particular group: minorities in Hong Kong. They might be born in Hong Kong but have their own native languages, neither Cantonese nor English, so that their situation with learning Putonghua becomes more complicated. Also, due to their tiny population and concentration of living community, it might be more appropriate to conduct the study in a residential community. Since from the fourth study, it indicates that the target language to learn could be changeable, taking us towards well-grounded pedagogical practice that might be usefully applied not only to Putonghua

and but also to other languages. In sum, by allocating different permutations of case sample, similar objectives could be designed and pursued.

8.6 Final concluding remarks

The premise of this study is grounded in the intuitive but ambiguous relationship between autonomy and technology in the context of language learning. In our increasingly digitalized world, the purpose of the study has been to provide insights into the nature of this relationship. In a technologically mediated context, learners' potential for autonomy can emerge proactively enabling them to take charge and determine learning objectives, or reactively as they responding to direction, organizing their resources to achieve pre-determined learning objectives.

Introducing a virtual component to the learning environment creates opportunities to observe students' capacity to cognitively transform and exchange ideas, characterizing autonomy as an interconnected and dynamic web of human interaction as they respond to TLE-mediated affordances. An ecological view provides insights into language and learning 'among learners and between learners and the environment' (van Lier 2000: 258) by connecting cognitive and social processes. It is a view that enhances our understanding of the nature of the relationship between autonomy and technology, which has the potential to inform the development of TLE content and online teaching methodologies so that teachers and learners can exploit and harness technology, striving for autonomy mediated by a TLE.

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Appendix A: Interview Participation Letter

Johnny Yao

(Phone)

(Date)

(Potential Participant) (Title)

Dear _____ ,

I am writing to appeal for your help in allowing me to conduct an interview with you for the purpose of collecting certain first-hand information for my research on the development of learner independence.

I am currently working on a part-time Doctor of Education Degree Program offered by the University of Bristol in UK, and I have to submit a dissertation to satisfy the program requirement for graduation. The dissertation is expected to be a small scale, yet intensive study on a subject related to education. Since I believe that the learner independence in the area of second language acquisition is especially important due to its pedagogical implications in teaching and learning, I have chosen to study on this issue. The particular focus of my study is on the development of students' learning independence in the context of a technologically mediated Putonghua programme in our college.

Your knowledge and insights would be invaluable to me in my study. I understand that you must by very busy and I would be most grateful if you could spare time to be interviewed. Please note that for the purpose of an accurate interview transcription, the interview will be tape-recorded if this is acceptable to you. However, please be assured that all information gathered from the interview,

including the tape-recording, will be treated with strict confidence and used solely for the purpose of the present study. The raw data will be seen only by myself and my supervisor. Your name will be anonymized in the transcript and also any paper or chapter arising from the research. A sample of the interview questions is attached hereto in the form of an interview guide for your perusal and reference. Please note that, if you wish, the transcripts of your interview may be returned to you for verification purposes. It should also be noted that your participation in the interview is purely, and you may answer any questions in the interview, on a voluntary basis, and you may withdraw at any time during the interview at your own wish.

For your convenience, I have prepared a reply proforma which you could return to me by fax at (Fax Number). Should you require any further information relating to my study, please feel free to contact me by phone at (Telephone Number), or by e-mail at (E-mail Address). Upon receipt of your reply, I may contact you again to fix the interview schedule.

I look forward to your favorable reply and thank you very much for your kind attention.

Yours faithfully,

_____

YAO Yijiang Johnny

Reply Proforma

To: Mr. YAO Yijiang Johnny

I accept your invitation for an interview with me in relation to your doctoral research on: “An Investigation into the Development of Hong Kong College Students’ Learning Independence in the Context of a Technologically Mediated Putonghua Programme”. I understand that all information gathered from the interview will be used solely for your doctoral research and my identity will not be divulged in any paper, report or chapter.

_____

Name of the Informant

Date:

Appendix B: Interview guides

All interviews were conducted in Cantonese.

Appendix B(i): Interviews with students in the first stage (5 June 2017 – 30 June 2017)

Introduction by interviewer

1. 自我介紹。

   Self-introduction.

2. 背景信息：你叫什麼名字？來自哪個學系？學習普通話多久了？

   Background information: What are your names? Which department are you in? How long have you been studied Putonghua?

3. 您怎樣評價自己的普通話水平？您對自己的普通話水平有怎樣的期待？

   What do you think of your proficiency in Putonghua? What kind of proficiency do you expect to have in Putonghua?

4. 您享受普通話的閱讀與寫作嗎？爲什麼？

   Do you enjoy Putonghua reading and writing? Why?

5. 您享受普通話的説話與聆聽嗎？爲什麼？

   Do you enjoy speaking and listening to Putonghua? Why?

6. 您都使用過哪些方法學習普通話？

   What methods did you use to learn Putonghua?

7. 您覺得此課程中所教的方法對於掌握普通話有幫助嗎？爲什麼？

   Do you think that the methods of learning Putonghua taught by the programme are useful or not? Why?

8. 您對於以電子技術輔助語言學習有何看法？

   What do you think about the language learning with technology?

9. 你有以電子技術輔助普通話學習的經驗嗎？如果有，是怎樣的？

   Have you been learnt Putonghua with the assistance of technology? If yes, how?

10. 你對我們學校開發的「大學普通話」課程有何看法？

    What do you think about the *CM* lesson in my college?

11. 你們在「大學普通話」裡使用普通話開心嗎？爲什麼？

    Are you happy to use Putonghua in *CM* lessons? Why?

12. 你們認爲在「大學普通話」裡使用普通話，與在一般課堂使用普通話一樣嗎？如果有不同，有何區別呢？

    Do you think are there any differences in using Putonghua between in the *CM* lessons and in the traditional classroom? If yes, how?

13. 你們認爲在「大學普通話」裡可以更容易地用普通話進行表達嗎？

    In the context of the *CM* lessons, is it easier to express yourself in Putonghua?

14. 你們認爲在「大學普通話」裡哪些教學活動更有幫助？

    Which *CM* activities are more helpful in terms of language development?

Appendix B(ii): Interviews with students in the second stage (3 July 2017 – 28 July 2017)

1. 對一些普通話對話訓練課程，好像學生感覺沒有什麼用處，對這些興趣不大，爲什麼？

   Students seem to think that Putonghua speaking courses are not useful, and are not

interested in them. Do you have any comments on these?

2. 在普通話課堂上，你喜歡用普通話或廣東話上課，爲什麼？

   In the Putonghua classroom, should the medium of instruction be Cantonese or Putonghua? Why?

3. 在普通話課堂上，你喜歡用普通話還是廣東話與同學交流嗎？爲什麼？

   In the Putonghua classroom, do you prefer using Putonghua or Cantonese to communicate with your classmates? Why?

4. 修普通話課程時，你喜歡老師給你們一些選擇嗎，比如學習內容、考核方式等等？

   When participating in this Putonghua programme, do you like being given choices regarding learning contents, ways of assessment, etc.?

5. 你是否經常計劃、反思和評估自己的學習？如何計劃、反思和評估？

   Did you often plan, reflect on and evaluate your own learning? If so, how did you do this?

6. 請談談你的個人目標和學習安排方面的情況。例如，你打算如何規劃自己的學習？是否有長期的和短期的目標？

   Can you talk about your personal goals and your planning for learning in this college? For example, how have you planned your learning? Did you set short-term and long-term learning goals?

7. 你覺得在傳統課堂裏的師生關係怎樣？

   What do you think of the teacher-student relationship in the traditional classroom?

8. 在這裏，你喜歡哪些？不喜歡哪些？

   What do you like and dislike about your study and life in the college?

9. 在普通話課堂上，你喜歡哪些活動、環節、材料？不喜歡哪些活動、環節、材料？

   In the Putonghua class, what kinds of activities, procedures, and teaching materials did/do you like, and what were/are the activities, procedures and teaching materials you didn't/don't like?

10. 你認爲「大學普通話」的內容足夠有趣嗎？有沒有一些吸引你的主題？

    Do you think that the content of the *CM* lessons is interesting? Are there any attracting topics for you?

11. 相比一般的普通話課，在「大學普通話」裡你們參與更多的討論嗎？爲什麼？

    Do you participate in more discussions in *CM* lessons? Why?

12. 什麼情況下，你們在「大學普通話」裡用廣東話？

    Under what circumstances would you use Cantonese on *CM*?

13. 你知道爲什麼我們在 RTR 論壇上設置每周一個帖子嗎？

    Do you know the reason that we have the weekly RTR thread?

14. 平時你願意主動上 RTR 論壇瀏覽並回帖發表意見，還是基於一種完成功課式的責任義務？

    Do you usually engage with the RTR forum freely or duty bound?

15. 爲什麼你們通常被動回應 RTR 論壇上老師發出的帖子，而較少主動發帖和回應其他同學的帖子？

    Why do you generally reply reactively to expert-generated threads posted to the RTR forum, rather than proactively generate and reply to one another's RTR

threads?

16. 通常你們更關注哪些同學的帖子？爲什麽？

    Which posts would you be most likely to read? Why?

Appendix B(iii): Interviews with students in the third stage (1 August 2017 – 25 August 2017)

1. 現階段的普通話學習有哪些事情給你留下比較深刻的印象？

   What has impressed you most in your Putonghua learning experiences currently?

2. 在經過了一段時間的普通話學習后，現在你喜歡掌握普通話嗎？

   Do you like learning Putonghua now, after learning Putonghua for almost several weeks?

3. 對學生而言，哪些課堂内和課堂外的行爲可以説是好的學習行爲？

   For students, what do you think are good learning behaviors in and out of the classroom?

4. 你希望從所開設的普通話課程中學到什麽？可以舉個例子嗎？

   What would you like to learn from the technologically mediated Putonghua programme? Can you give an example to explain this?

5. 可以談談你在普通話學習方面所面臨的主要困難和障礙嗎？你打算如何剋服這些困難和障礙？

   Could you talk about the major difficulties and constraints in your Putonghua learning? How would you like to cope with them?

6. 如果你在課堂上有疑問，你通常會在課堂提問，還是在課後提問？爲什麽？

   If you have questions, do you usually ask questions in class, or after class? Why

and why not?

7. 有些學生說在課堂上學到的東西很少。你對此有何看法。

   Some students say that they learn very little in class. Could you talk about this?

8. 你可以解釋一下在什麽情況下你的學習比較主動嗎？有哪些因素有利於促進你的學習興趣？

   Could you explain in what situations you have been relatively self-initiated in learning? What are the factors that are possibly beneficial to the promotion of the learning interest?

9. 你可以解釋一下在什麽情況下你的學習比較被動嗎？有哪些因素阻礙你主動地去學習？

   Could you explain in what situations you have been relatively passive in learning? What factors have prevented you from being self-initiated and independent?

10. 在課堂上你喜歡獨立學習嗎？以個人形式還是集體合作的方式進行？爲什麽？

    Do you like to work independently in class? Individually or collaboratively? Why?

11. 爲了學好普通話，學生在課堂内、外應該做些什麽？爲了幫助學生學好普通話，你覺得老師在課堂内、外應該做些什麽？

    What should students do in and outside class to learn Putonghua? What should teachers do in and outside class to help students learn Putonghua?

12. 對老師而言，你認爲哪些課堂内和課堂外的行爲可以説是好的教學行爲？

    For teachers, what do you think are good teaching behaviors in and out of the

classroom?

13. 你認爲怎樣的師生關係對普通話學習和學生的個人發展有幫助？

    What kinds of teacher-student relationship do you think are beneficial to Putonghua learning and student development?

14. 根據你的觀察和學習經驗，你覺得目前老師所教的是學生所要學的嗎？

    Based on your observation, is there a mismatch/gap between what is taught and what is learned?

15. 根據你的觀察，你覺得老師通常鼓勵學生在課堂上發言嗎？

    Based on your observation, do teachers encourage students to raise questions in class?

Appendix C: Data related to all interviews throughout three stages

Appendix C(i): Interviews with students in the first stage (5 June 2017 – 30 June 2017)

Number of interviews	**Form of interviews**	**Focuses/purposes**
10	Individual	● Open discussion, sharing experience of learning Putonghua in TLE
13	Group	● Describing own experiences in TLE; ● Any benefits from TLE; ● Impact of TLE on language learning; ● Evaluation of current college courses held in a TLE; ● Evaluation of and suggestions for TLE administration.
14	Pair	● Feelings about the particular learning environment; ● Evaluating own learning in a TLE; ● Especially active in TLE or not, why; ● Suggestions to teachers, administration, and students themselves in a TLE.

Appendix C(ii): Interviews with students in the second stage (3 July 2017 – 28 July 2017)

Number of	**Form of**	**Focuses/purposes**

interviews	**interviews**	
10	Individual	● Sharing learning experience in *CM* lessons; ● Comparing differences in using Putonghua between in the *CM* lessons and in the traditional classroom; ● Expressing themselves more freely in *CM* lessons or not, why.
13	Group	● Stating more helpful activities in *CM* lessons; ● Preferred language of using medium of instruction in *CM* lessons, why? ● Preferred language of communicating with classmates in *CM* lessons, why? ● Comparing the teacher-student relationship in the traditional classroom with in *CM* lessons.
14	Pair	● Evaluating the content of the *CM* lessons; ● Participate in more discussions in *CM* lessons or not, why? ● Describing circumstance of using Cantonese in *CM* lessons; ● Evaluating about the weekly RTR thread; ● Preference of engaging with the RTR forum, why?

Appendix C(iii): Interviews with students in the third stage (1 August 2017 – 25 August 2017)

Number of interviews	**Form of interviews**	**Focuses/purposes**
10	Individual	● Willingness of replying to expert-generated threads posted to the RTR forum, why? ● Willingness of generating and replying to RTR threads, why? ● Preferred posts of reading, why?
13	Group	● Evaluation of learning Putonghua in *CM* lessons; ● Discussing the major difficulties and constraints in *CM* lessons; ● Preference of learning Putonghua autonomously in *CM* lessons, why? ● Evaluating the factors that make you progress in *CM* lessons; ● Evaluating the factors that prevent you from learning Putonghua in *CM* lessons.
14	Pair	● Evaluating the role of teachers in *CM* lessons; ● Giving the criteria of good learning behavior in *CM* lessons; ● Becoming more self-initiated in *CM* lessons or not, why? ● Description of preferred teacher-student relationship in *CM* lessons.

Appendix D: Assignments and posts by students

All assignments were written in Chinese originally and translated into English.

Appendix D(i): Lesson 8: assignment by Simon

Task: identify a hero or icon that is of interest to you. Use the internet and other resources to find information about your hero or icon.

Heroes and heroines are all around

In the world there are real heroes and heroines everywhere. People, who are not known, but they are always doing great things to save, help and protect other ones. They are looking to do simple, but valuable, little things to make this world a better place to live, changing people's life in ways we never imagine.

Maybe you are wondering where this people who I am talking about are. Well, just see around and look carefully because you are around by them. Fire fighters, teachers, civil servants, single mothers, they guy next to you, we don't know, may you have given her/him the opportunity to do something valuable. Do you want a brief description about them? It is impossible, because that is what makes heroes and heroines so special. We don't know almost anything about their life, but we know that they are outside, doing something valuable.

Finally I have to say that heroes and heroines are not perfect, they cannot save us from everything but they will never let us down. When you feel your world is breaking down and a person appears to give you a strong hand, you will know that you have found a hero.

Appendix D(ii): Lesson 8: assignment by Kai

My hero

My hero is my mother, I choose her because she is a great person and a good mother. She's always helping me and she is always there when I need her.

My mother is born in a poor family. She studied until the secondary schools and after that she took a secretarial career of clerk, because her parents didn't have enough money to afford her further studies. So she started to work early. Moreover, she also worked as a babysitter in the evening as a part-time job. I love and respect my mother, because she is always friendly and tries to help everyone.

She is my hero because she always helps and supports me. Especially when I encounter some difficulties and problems, she is always giving me useful advice and tells me the thing that is correct. So she is my personal hero. Anyway, I have learnt a lot from her. For example, she always teaches me that you will fight for what you want, trying to work hard to have these things. To be tolerant and honest and never do something bad.

Appendix D(iii): Lesson 13: assignment and independently generated parent thread by Vicky

Task: show your opinion about the class system in this society. Use the internet and other resources to find more information about them.

Assignment – the class system

I'm pretty sure that the class system is part of a global phenomenon, because nowadays we are used to talk about rich and poor countries, rich and poor areas in those countries, and therefore we tend to judge people just by taking into account what they have rather than for what they really are or represent in the world. Class systems is well represented in the world, because we will always find the economic

differences among those countries, no matter where we might be.

In Hong Kong we can easily notice the class differences in a lot of aspects. For instance, in the Peak and southern area of this island, we can find more beautiful houses, grand shopping malls, commercial centers, and so on. However,, in the northern part of new territories, such like Tin Shui Wai, we can barely find a clean public toilet. Green areas is also less. The reason is that more poor people, in terms of new migrants from mainland China, single mothers, elders and people with disabilities concentrated there. They are ignored completely by the government.

As a conclusion, I don't think there should be a place like that, because if there would be, then people would feel discriminated by other privileged people. I mean that people would be equal in every sense, and we all could share the same space.

Forum thread – the class system

I think class systems are a world phenomenon. People in the past had social classes and that has not changed at all. Every generation has gotten the same social classes but in a very different way. Now imagine that something happen to you and you have given amazing powers. What should you do about the class system?

1. Would you attempt to erase the social class?
2. If yes, how would you use your power to erase them?
3. If no, why not?
4. Do you think that it will be helpful to build in an equal society by erasing the social class?

Appendix D(iv): Lesson 13: forum post by Carol – Re: talking about the class system

Class systems will always have a place in society even though people don't want to

have. It is something out of our control. That is the way the things are supposed to be. Here in Hong Kong is like so, and everywhere is also like so. For example, there always going to be poor people as well as rich people.