

Learning English as a Foreign Language in an Online Interactive Environment: A Case Study in China

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Abstract

This case study is designed to examine Chinese university students' English as a foreign language (EFL) learning in an online interactive context. Investigation focused on the students' perceptions of and engagement in EFL learning that occurred in a technology-supported context. Informed by the sociocultural theory, four theoretical constructs: learner autonomy, interactive learning, Zone of Proximal Development (ZPD) and scaffolding, form the theoretical framework to investigate Chinese university students' EFL learning in a Computer-Assisted Language Learning (CALL) context. This theoretical model informs the adoption of a qualitative case study approach with statistical descriptions. A total of 154 Chinese university EFL students participated in the research. Data were collected via a questionnaire, focus groups, individual face-to-face interviews and online documents.

Through data analysis, it revealed that Chinese university EFL students had positive perceptions of interactive online language learning, which promoted learner autonomy. Participants were confident about their abilities to find out appropriate learning materials and associated well-scaffolded instructional resources that were within their ZPDs. In the learning process, they enjoyed an increasing level of autonomy in language learning. They autonomously selected, organized and engaged digital resources, including learning materials and tasks as well as learning strategies, in their learning which were appropriate to language levels and catered for their learning needs. They showed the sign of good language learners with high degree of

learner autonomy, who indicated a desire to continue their language learning in the future. The participants also regarded online space as a low-stress context for more interactive learning in an English as a foreign language context.

Although the participants had developed some degree of learner autonomy via learning in the online mode, their autonomy in language learning, particularly for after-class online EFL learning, was still in development. There was a need for them to expand their language knowledge and skills development, particularly in the area of intercultural learning. Their selection and adoption of learning resources were also expected to improve to suit their current language abilities and their learning needs. Their understanding of and engagement in interactive learning were yet to be enhanced as well as they became more familiar with learning in this emerging context.

Built on these findings, a tentative model of online EFL learning for facilitating learner autonomy is proposed to fulfil Chinese EFL students' language learning needs in an online context, and help them to achieve better learning outcomes. It is envisaged that such a model is replicable to teaching and learning EFL in similar contexts.

Statement of originality

This is to certify that to the best of my knowledge, the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

This thesis meets the *University of Sydney's Human Research Ethics Committee (HREC)* requirements for the conduct of research.

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Chapter 1 Introduction

1.1 Background

Since the implementation of the Reform and Open Policy in China in the late 1970s, there has been an increasing enthusiasm for learning English as a foreign language (EFL) (Gao, Barkhuizen, & Chow, 2011). China has become one of the leading economies over the past few decades, and there has been an attendant development of communication and interaction with other countries, which is also reflected in educational institutions (Teng, 2017). English, as an international language for communication across cultures, has attracted a lot of Chinese learners (Jenkins, 2000; McKay, 2002; Pennycook, 2014). Recent statistics show there were about 400 million EFL learners in different levels of educational institutions nationwide in 2012 (Wei & Su, 2012). A rapid increase of that number is predicted (Rao & Yuan, 2016).

The Chinese government has paid special attention to EFL learning and teaching, and a series of national standard curricula have been instituted since the early 2000s (Liard & , 2013); for example, College English Curriculum Requirements (CECR) (Ministry of Education [MoE], 2007). The Beijing Olympic Games in 2008, the Expo 2010 Shanghai China, and the “One Belt One Road” initiative in 2013 have been the huge stimulus for “cultivating a large number of international talents with an international view, knowledge of international rules, and capacity for participating in

international affairs and competition” (MoE, 2010), and have inspired interest in learning English for all ages and occupations (He & Han, 2018; Wang, 2018).

English is a compulsory subject for all non-English major university students in China. The government CECR (MoE, 2007) outlines the objectives of EFL education in China: “to develop students’ ability to use English in a well-rounded way . . . , enhance their ability to study independently and improve their general cultural awareness” (MOE, 2007, p. 18).

However, current English teaching in China is historically recognized to be “disappointing” (Hu & McGrath, 2010, p. 41). A traditional textbook-based approach is widely used in various EFL education contexts nationwide in China, and is described to be a “time-consuming but low-efficient” (Dai, 2001, p. 1) method for language development. This approach cannot cater for the needs of either the learners or the society in modern times (Yan, 2012).

EFL teaching in China is characterised by a teacher–student one-way mode, leaving limited space for students to play an autonomous role, and not allowing them to be the focus of learning (Hu, 2005; Rao, 1996). A lecture-based learning approach, strictly controlled and dominated by teachers, is widely used in the classroom (Cai, 2013; Mo, 2012). Teachers give explicit instruction to students, who are disciplined to follow their teachers’ guidance without doubts (Zhu et al., 2010). Learning in this

context, EFL students usually have to entirely rely on teachers (Hu, 2016), and their individual needs for language development could not be satisfied (Chik, 2018).

EFL learning and teaching in China is also dominated by a test-oriented approach, whose main purpose is to prepare students for various language tests rather than to develop their language abilities and knowledge in the long term (Renandya & Hu, 2018). EFL students' language competencies in meaning, expression, information delivery, and intercultural communication (Dervin & Liddicoat, 2013; You, 2004), could be compromised in the learning process.

The situation is compounded with the rapid expansion of student numbers in China's higher education institutions. The student–teacher ratio in Chinese universities has increased in the last few decades (Hu & McGrath, 2010). A shortage of well-trained EFL teachers has been observed in universities and colleges across the country. The latest report shows that the EFL student–teacher ratio in higher education institutions was 200:1 in 2006 (Zhang, 2006). It is obvious that a sole reliance on teachers cannot fulfil all Chinese EFL students' learning needs.

New technologies have been introduced to EFL learning and teaching in China since the early 2000s (Tang, 2009; Zhang, 2009). Regarding technology-supported English learning and use, the most recent document released by the Chinese government (China's Standards of English Language Ability) stipulates that EFL

students should: “be able to learn English language via the Internet. ... to employ the Internet to seek assistance to English language learning. ... to initiate, maintain, and end a conversation by using English via the Internet” (MoE, 2018, pp. 43, 53, 64).

To help students achieve their goals, the integration of Information and Computer Technologies (ICTs) into English learning and teaching is advocated, as the CECR (MoE, 2007) states: “The extensive use of advanced information technology should be encouraged, computer- and web-based courses should be developed, and students should be provided with favourable environments and facilities for language learning” (MoE, 2007, p. 23).

In practice, however, EFL education in China is slow to adopt ICTs for learning and teaching purposes, nor to create new learning resources in a Computer-Assisted Language Learning (CALL) context (Li & Walsh, 2011; Li, 2014). Although technology-supported EFL learning and teaching has been observed to be employed in some institutions in China (e.g., Jiang, 2018; Lan et al., 2015; Su et al., 2018), it is currently on a relatively small scale.

Furthermore, EFL students are also facing various challenges in terms of the use of ICTs in their language learning, such as digital distraction (Kim & Gilman, 2008; Nguyen, 2009), information redundancy (Finch, 2013; Goh & Aryadoust, 2015), foreign language anxiety (Liu & Jackson, 2008; Simpson, 2008), and inappropriate

use of learning resources (Farahian, 2016; Jimenez & Kanoh, 2012). These challenges have become concerns of both EFL students and teachers, and prevented them from making better use of technologies for language learning purposes.

Technology-supported EFL learning and teaching in China has attracted researchers' attention (e.g., Fang & Zhang, 2012; Li & Li, 2018; Li & Walsh, 2011). Both potential benefits and challenges of CALL in this context are investigated and presented in these studies, encouraging future research on this approach. However, little has been explored on EFL students' perceptions of and engagement in technology-supported EFL learning. This calls for more investigations of Chinese university EFL students' language learning practice in a technology-supported context, as well as their perceptions and experience of learning in such environments.

1.2 The current study

This study is designed to investigate Chinese university students' perceptions of and engagement in learning EFL on an online interactive platform. A number of previous studies (e.g., Bahrani & Tam, 2012; BavaHarji, Alavi, & Letchumana, 2014; Engin, 2014; Hung, 2009) have found that digital learning resources, audio-visual materials in particular, could better facilitate EFL learners to achieve learning outcomes. Yet, few studies focused on developing a framework of learning English outside the classroom with integration of audio-visual videos in China. Based on the findings of previous research, the current study investigates EFL learning in the

Chinese university context with a view to contributing to the research literature on this topic.

This study utilises an online interactive EFL learning platform, which was produced by a large Australian Research Council (ARC) Linkage project: Image, perceptions and resources: Enhancing Australia's role in China's English language education (2011–2014), to examine Chinese university EFL students' learning perceptions and engagement. It provides empirical data for the development of a tentative model or framework for autonomous online EFL learning. Informed by a broad CALL context and a multimedia-supported language learning context in particular, four theoretical constructs—learner autonomy, interactive learning, Zone of Proximal Development (ZPD) and scaffolding (Benson & Lor, 1998; Ellis, 1985; Gabel, 2001; Ohta, 2000; Vygotsky, 1978)—form a quadrangle theoretical model to examine Chinese university students' EFL learning and inform the development of research methodology, as well as the final tentative model or framework.

As a qualitative case study with statistical descriptions, four methods of data collection were employed: a questionnaire survey, focus groups, individual face-to-face interviews, and documents, including online learning resources, students' learning logs, and the recorded interactive learning activities. A total of 154 Chinese undergraduate EFL students studying in a first-tier university in southwestern China participated in the research. The collected data from different sources were coded,

categorized and analysed to find out Chinese EFL learners' perceptions of and engagement in an online interactive language learning context. Triangulation was also used to ensure the findings and conclusions were reliable, valid and authentic.

1.3 Research questions and aims

Regarding the research gap, this study is to investigate the technology-supported EFL learning of Chinese university students. Two research questions are raised, whose answers are to serve the fulfilment of two research aims.

RQ1: What are Chinese university EFL students' perceptions of learning EFL in an online interactive context?

The first RQ focuses on Chinese university EFL students' perceptions of language learning in an online interactive context by using various multimedia resources, including audios, videos, texts, pictures, and other interactive materials.

The first aim of this study is to investigate Chinese university EFL students' perceptions of using the online interactive learning platform as one of the required learning tools to develop their language knowledge. It provides the researchers and educators with a set of empirical data that help them better understand students' learning with the use of ICTs, as well as their expectations of this new learning approach.

RQ2: How does this group of students learn EFL by using multimedia resources in an online interactive context?

RQ2 puts its focus on EFL students' learning experiences and engagement. In detail, major learning-related issues including selection and organization of learning resources, decisions of engagement in, monitoring of learning process, and evaluation of learning outcomes, are the focal points of this research question.

The second aim of this study is to examine the employment of audio-visual materials as well as the online interactive tasks to scaffold Chinese university EFL students' knowledge building and skill development. Both the internal factors including EFL students' current language levels, their learning needs and goals, and their individual learning preferences, and external factors including the learning context, learning resources, and corresponding strategies, are investigated in this study to find out their influence on students' engagement in online interactive learning.

These factors are carefully considered in establishing a tentative model or framework for online interactive EFL learning. The identification and analysis of the factors also serve as a point of reference for the further research design, curriculum and pedagogy innovation, digital learning platforms design and digital materials

creation, which are expected to assist English language learners in achieving their optimal learning outcomes.

1.4 Significance of the study

This study contributes to the pedagogical innovation in EFL learning and teaching in Chinese universities. It promotes the shifts of the instruction of EFL education from a traditional chalk-and-blackboard mode to a technology-supported mode, from a teacher–student one-way mode to a student-centred mode, by effectively employing new technologies in learning and teaching. Chinese university EFL students may experience autonomous immersive learning with abundant multimedia resources that cannot be achieved in the traditional teaching and learning classroom. The research also contributes to the existing body of literature on learning English in a computer-supported environment with a set of distinctive research evidence from China.

The tentative model proposed by this study will help initiate innovations in curriculum design, pedagogical development and learning materials creation in Confucius heritage countries, particularly in China. It is expected to respond to the calls of CECR (MoE, 2007) and China’s Standards of English Language Ability (2018) to provide an “insertion” of technology in EFL learning and teaching in the university context (Thomas, 2012). Students are encouraged to learn with both the

traditional EFL learning and teaching approach and the new technology-supported one, to maximize their learning outcomes.

At the conceptual level, this is one of the first systematic studies that examines Chinese university students learning EFL via an online interactive learning platform. Learners are able to access a number of audio-visual learning resources, as well as opportunities to interact with teachers and peers in the process of exposure to the target language for task completion in an emergent context. Compared with the traditional lecture mode of learning and teaching, this innovative mode can facilitate learner autonomy and interaction in learning that provides a valuable reference for future studies.

At the theoretical level, the framework incorporates a number of theoretical constructs including learner autonomy, interactive learning, ZPD and scaffolding to investigate Chinese university EFL students' perceptions of and engagement in learning EFL in an online interactive learning context. The framework is also being envisaged to provide a conceptual base to guide the research design and methodology innovation, leading to the theorization of the research findings as they arise. This theoretical framework may also be applied to examine the online EFL learning in similar Confucian heritage contexts; for example, Korea, Japan and Singapore to name a few.

At the methodological level, this study employs the questionnaire, focus groups, individual face-to-face interviews and documents to collect both qualitative and quantitative data. The collected data triangulate the research findings and provide empirical evidence to develop a workable model or framework for Chinese university EFL students to enhance English knowledge and skills in an autonomous online context.

1.5 Organization of the thesis

This thesis is composed of seven chapters. Chapter 1 offers an introduction to the entire study by presenting the new research context, briefing the current study, highlighting the aims and significance of the study, and stating the two research questions that guide the study.

Chapter 2 outlines the current directions and development of technology-supported language learning by reviewing existing empirical studies. Arguments that arise from previous studies inform the design of this study.

Chapter 3 maps the theoretical framework of the present study. The concept of CALL provides a broad research context for the study. Four strains of theories, i.e., learner autonomy, interactive learning, ZPD, and scaffolding, which are incorporated within the CALL context, form the framework to guide the study. The theoretical

framework further theorizes a tentative model of technology-supported language learning.

Chapter 4 describes the empirical study in detail. It introduces the research design and methodology. The research context and process, participants, data collection, and data analysis are presented in this chapter. Four instruments for data collection, a questionnaire, focus groups, individual interviews, and documents are described. Methods for coding data and analysing data are also introduced. Consideration of trustworthiness and ethics is incorporated in this part.

Chapter 5 reports both qualitative and quantitative data collected from various sources via four methods of this study. The gathered data are also categorized according to different themes in terms of the four constructs of the theoretical framework. Various forms, including texts, tables, and figures, are used to present and interpret the data.

Chapter 6 discusses the data presented in Chapter 5 with reference to existing empirical studies that are critically reviewed in Chapter 2, and in relation to the theoretical perspectives presented in Chapter 3. The discussions centre on the two research questions, i.e., Chinese university EFL students' perceptions of and engagement in language learning in an autonomous online context by using multimedia resources.

Chapter 7 presents the conclusion of the entire study. It links the findings with the empirical studies and theories to generate a tentative model for autonomous online EFL learning with the integration of multimedia resources. Implications for EFL learning and teaching for Chinese university students, as well as for those in similar context are also proposed. Suggestions for future research on technology-supported language learning are presented in this chapter as well.

Chapter 2 Literature Review

This chapter systematically reviews empirical research on CALL, learner autonomy, interactive learning, ZPD and scaffolding, which informs the identification of the research gap, the design of the study, development of research questions, as well as the research methods of this present study.

2.1 Computer-Assisted Language Learning

2.1.1 CALL and EFL learning

The concept of CALL, which refers to the application of computer techniques and methods in language learning and teaching (Gamper & Knapp, 2002), was first introduced in the PLATO project in America in the 1960s (Marty, 1981). CALL is interdisciplinary, developing with innovations in other fields synchronously, such as instructional technology, technology-supported interaction, and psychology (Parmaxi et al., 2013).

CALL is related to language learning and teaching that happens in the environment with the technological support of computers, the Internet and new media (Gamper & Knapp, 2002). With the rapid development of the Internet and digital devices, CALL has been applied to language learning and teaching as an important approach (Thomas, Reinders, & Warschauer, 2012; Zhang, 2012). This study investigates university EFL students' perceptions of and engagement in a Chinese CALL context, which is used as a newly emerging learning approach for students to

develop their language abilities and knowledge in an autonomous context. The concept of CALL is also used as a learning context in the research design to cover four strains of theoretical constructs.

CALL has been viewed as an effective tool for helping teachers and students obtain optimal language learning outcomes. Existing studies have noticed the successful integration of CALL into traditional in-class language learning (e.g., Almekhlafi, 2006; Grgurovic, Chapelle, & Shelley, 2013; Hazaea & Alzubi, 2016; Lim & Shen, 2006; Son, 2018; Watkins & Wilkins, 2011; Wu, Yen, & Marek, 2011). It has been accepted by language learners and teachers, and been treated as an increasingly important tool for language development in modern society (Haryati, 2018; Hsieh, Wu, & Marek, 2017; Fan, 2011; Morino, Lopez, & Ono, 2017). In this study, the effects of CALL on promoting Chinese EFL students' language learning are extensively reviewed to highlight the various research focuses or aspects in (e.g., CALL and autonomous learning, digital EFL learning materials, online interactive learning). The review was intended to map the broad research terrain on the topic and serve as a point of departure for the present this study by way of identifying a research gap, and hopefully added more information on CALL and its practical employment to literature.

In a study conducted in the United Arab Emirates (Almekhlafi, 2006), a total of 83 elementary-prep school EFL students were divided into experimental groups and

control groups for investigation of the effects of CALL in the classroom. Data were collected and analysed via ANOVA and a questionnaire. The study found that students perceived ICTs as a useful tool in their in-class English learning. They also indicated that they would continue to use CALL in their future learning. The study shows that CALL can be successfully integrated into traditional English learning in the classroom. EFL students are acquainted with the use of CALL as a facilitator to help them achieve their learning goals. Considering it was a study focusing on young EFL students in a Middle-East country, the current one employs the use of CALL in a Confucian heritage country, and investigates its use in a university context among adult EFL students.

Another study focused on English-major students in a university in Taiwan investigated the effectiveness of the flipped classroom model through using online written and oral interaction on the enhancement of EFL learning and teaching in the classroom (Hsieh, Wu, & Marek, 2017). A mixed research method was employed for data collection through instruments of pre- and post-tests, two questionnaires, in-class observations, and semi-structured focus groups. Results of the study indicated that online flipped classrooms could motivate students' learning, as well as help them improve language knowledge. It highlighted the successful integration of CALL into in-class EFL learning and teaching. CALL benefited both students' learning outcomes, and their learning experience. To better understand CALL contextualized in a Chinese university context, this study investigates the use of CALL from students'

perspectives through in-depth individual interviews. This helps gain more context-specific data on students' perceptions and employment of the new learning approach to develop their EFL abilities and knowledge.

Besides its use in the classroom, CALL is also found to be an effective supplement to its traditional counterpart for developing students' language abilities and knowledge after class (Al-Jarf, 2004; Arifani, Rosyid, & Husniah, 2018; Lai & Gu, 2011; Liu, 2012; Zou, Li, & Li, 2018). It has been recognized as a different approach, a less formal one from the traditional in-class one (Alshammari, Parkes, & Adlington, 2017; Hung et al., 2010; Zhang et al., 2004). It has also been observed that CALL is accepted by increasing numbers of teachers and students as a routine and formal approach for after-class EFL learning and teaching around the world (e.g., González López, 2018; Huang & Hung, 2013; Hwang, 2018; Mazman & Usluel, 2010; Miyazoe & Anderson, 2010).

For examining the use of online technologies in promoting students' language learning outside the classroom, a case study was conducted in Hong Kong (Lai & Gu, 2011). A total of 279 university foreign language learners participated in the study. An online survey and semi-structured interviews were adopted for data collection. Results revealed learners had various considerations when selecting tools for after-class online language learning, including both external variables, such as the length of study, accessibility of the tool, and internal variables, including digital

literacy, their perceived effectiveness and efficiency of the tool. Investigating EFL students' selection of learning resources and their preferences through making a comparison between these factors and findings of the current study can encourage the future design and creation of learning contents for an autonomous learning approach, which is one of the focal points of this study.

To investigate students' perceptions of CALL as a tool for EFL learning outside the classroom, Huang and Hung (2013) focused on the use of discussion forums. A group of 17 university students in Taiwan participated. An attitude survey and a reflective questionnaire were used for collecting data. It was found that online learning was treated by EFL students as a beneficial tool for their language development, which could strengthen mutual scaffolding among peer students. It shows that online language learning can create a space for students to have more opportunities for exposure to language learning. EFL students' peer interaction is also investigated in this study, for finding out its influence on involved students' language development. The current study is enlightened by Huang and Hung's argument (2013) that enhanced learner interaction may be of importance to EFL learning in a CALL context, which may not be easily achieved by the traditional approaches to teaching and learning. This will be further examined in the study (see Chapter 6 & 7).

2.1.2 Students' perceptions and employment of CALL

From learners' perspectives, the application of CALL to language education can create a friendly learning environment for them (Alshahrani, 2016; Shin & Son, 2007; Uehara & Noriega, 2016). Studies have found that distance learning provides a low-anxiety learning environment for shy or embarrassed students (Hadjikoteva & Neykova, 2017; Peterson, 2011; Venere & Watson, 2017; Yi & Majima, 1993). Online language learning encourages EFL students, who were often shy in face-to-face interaction, to take part more actively in learning activities (AbuSeileek, 2012; Chu, 2008; Eskandari & Soleimani, 2016; Freiermuth, 2002; Khoshsiman & Sayadi, 2016). The constructed learning context may have impacts on language learners' perspectives as well as their practical learning behaviours. To gain a deeper understanding of CALL and learners' learning in a CALL context, learners' perceptions of this learning approach is yet to be investigated in the current study.

Anxiety often tends to be seen as a kind of negative feeling EFL students often encounter in EFL classrooms. To examine the effects of CALL on promoting students' EFL learning experience, Chu (2008) conducted a case study in Taiwan. Participants were 364 undergraduate EFL students. Five scales were administered in the form of a questionnaire, serving as instruments for data collection. The study indicated CALL, as well as online language learning, encouraged shy EFL students to take a more active participation in interactive learning activities. EFL students' descriptions of their learning experiences and the use of CALL confirmed the effects of ICTs to ease students' anxiety and to create a comfortable context for language learning.

Technology-supported learning also provides EFL students with the possibility to select their preferred environment for language practice, which may fulfil students' needs and help them achieve their personal learning goals (Cerccone, 2008; Ducate & Lomicka, 2008; Young, 1991). EFL students are allowed to engage in learning at any time, having increasing flexibility in learning activities (Rubio & Thomas, 2014). It has been recognized that students' choices of learning environment and time are strong personal features, which reveal some features of language learning in a CALL context (e.g., Dang, 2010; Lizzio, Wilson, & Simons, 2002; Wang et al., 2009). These factors, regarding EFL students' time and environment selection for learning language via the Internet, are further investigated in the current study. It reflects Chinese university EFL students' attitudes towards learning English in a CALL context, as well as the employment of CALL in a Chinese university environment.

A study was conducted to investigate the use of fragmented time for pronunciation practice in a CALL environment (Saran, Seferoglu, & Cagiltay, 2009). Twenty-four students participated in the study, who were purposefully divided into three groups. A post-test, a questionnaire, and post-study interviews were used for data collection. It was found from the study that fragmented time-slots were valuable for English language learning, particularly for learning that occurred on the online context. Making use of fragmented time is believed to be useful for improving EFL students' language abilities and knowledge. This study digs out more information on

how Chinese university EFL students spend their fragmented time on learning activities, and what time they usually invest to learning, which provides some insights into their autonomous language learning in a CALL context, and helps reveal their perceptions of this new learning approach.

2.1.3 CALL and self-evaluation

Evaluation has been considered as a key part for language learners and teachers to promote learning in a CALL context, particularly in EFL students' autonomous learning (Chapelle, Cotos, & Lee, 2015). Empirical studies have noticed the employment of online technologies for self-evaluation during students' language learning process (e.g., Anwar & Husniah, 2016; Chang, 2007; Han & Keskin, 2016; Liao, 2016). Information obtained from self-evaluation with the support of digital technologies helps students decide what learning to undertake for the next period, the approaches and endeavours to deal with learning obstacles, and finally, the mastery of the target language (Allen, Hadjistassou, & Richardson, 2016). The present study examines EFL students' employment of modern ICTs and various resources, including learning materials, tasks, scaffolded materials, and interaction for self-evaluation in an online context, to reveal its influence on EFL students' autonomous language learning in a Chinese university context.

Smith and Craig (2013) conducted a study to investigate EFL students' self-evaluation in a CALL context. A total of 180 university EFL students participated.

An action research approach was adopted. EFL students' self-reflection entries, interviews, end-of-course evaluations, and teacher reflections were employed for data collection. The study presented that the improvement of EFL students' ability of self-evaluation in a CALL environment could be a key factor contributing to a positive shift of role from passive information receivers to active knowledge constructors in their learning. It suggests that students' self-evaluation is related to their autonomy in language learning. The influence of self-evaluation on the promotion of learner autonomy is investigated as a focal point of this study. Through investigating EFL students' self-evaluation in an autonomous context with the support of digital resources, this study will hopefully gain more information on CALL and its usefulness to EFL learning from various aspects.

2.1.4 Challenges in a CALL context

Although CALL is accepted and employed as a beneficial approach for EFL learning and teaching across the world for its merits, it still has some drawbacks that may be harmful to language development. Distraction is a common one (Alemi, Meghdari, & Haeri, 2017; Basaran, 2013; Dashtestani, 2014; Herrera Mosquera, 2017; Shahlou & Izadpanah, 2016). Measures are advised to be taken to lessen the harm caused by distraction during students' learning with digital devices and multimedia resources (Bani-Hani, Al-Sobh, & Abu-Melhim, 2014; Richards, 2005). Investigation of students' distraction that occurs in a CALL context is needed to provide a picture of EFL students' language practice, as well as the challenge they

are facing in language learning. Some other key drawbacks of CALL includes anxiety, information redundancy, and a lack of preparation for technology-supported learning, which may demotivate students' learning interest and lead to unproductive learning results (e.g., Campbell, Brown, & Weatherford, 2008; Ocampo, 2017; Tseng, 2010; Yaghoubinejad, Zarrinabadi, & Nejadansari, 2017).

A quantitative study conducted in 2013 noticed that not every student was happy with the use of CALL for EFL learning (Lu, Throssell, & Jiang, 2013). A total of 347 university students participated in the questionnaire and 20 of them attended semi-structured interviews. The study suggested that insufficient preparation and inappropriate guidance in the learning process demotivated the use of CALL. More methods for data collection are to be used in the current study on EFL students' perceptions of CALL. This helps researchers have a more substantial finding on CALL and its influential factors among a similar range of EFL students.

Some recent empirical studies on CALL are listed in Table 2.1 below. These studies have focused on more issues of language learning and teaching in terms of the use of CALL and online learning tools, including learning motivation and confidence (Dinh, 2018; Farivar & Rahimi, 2015; Ockert, 2018), students' language skill and knowledge development (Hajebi et al., 2018; Kim, 2018; Maftoon, Hamidi, & Sarem, 2015; Soltanpour & Valizadeh, 2017), and some challenges CALL and online learning bring about for teachers and students (Cengiz, Seferoğlu, & Kaçar, 2017).

Table 2. 1

Summary of other recent studies on CALL

Source	Context	Findings	Comments
Ockert, 2018	18 junior high school EFL students in Japan	CALL and digital devices enhanced students' self-determined learning motives.	To develop the study, it needs to investigate the impacts of technology on EFL students' learning outcomes.
Dinh, 2018	10 ESL and EFL teachers from USA and Vietnam	Videos in a CALL context helped students maintain attention and strengthen motivation in learning. Authentic videos are mainly used as modelling in a EFL context.	The influence of videos on EFL learning need to be considered from students' perspectives.
Hajebi et al., 2018	66 Iranian EFL learners	Web-based learning enhanced EFL learners' vocabulary knowledge.	Online learning tools can be effectively used for students' autonomous EFL learning.
Kim, 2018	44 Korean undergraduate EFL students	CALL and MALL are both effective tools for developing EFL students' overall writing skills. They are both accepted and welcomed by EFL	CALL and MALL could promote EFL students' learning and enhance their learning experience.

		students.	
Cengiz, Seferoğlu, & Kaçar, 2017	8 Turkish EFL in-service teachers	CALL might be too challenging for some EFL teachers. Training was expected, for incorporating CALL with local EFL teaching.	Simply introducing CALL into EFL learning and teaching does not necessarily lead to satisfying outcomes for teachers and students.
Soltanpour & Valizadeh, 2017	50 EFL students majored in English translation in a university in Iran	CALL can enhance EFL students' writing accuracy, while reflective notes can further benefit some students' writing skill build-up.	EFL students' individual differences should be taken into consideration when designing a CALL context for them.
Maftoon, Hamidi, & Sarem, 2015	40 intermediate EFL learners in Iran	With teacher's e-feedback, students' vocabulary learning in a CALL context can achieve positive outcomes.	Teacher's involvement in autonomous CALL is influential to EFL students' vocabulary learning.
Farivar & Rahimi, 2015	60 EFL students from a language institution in Iran	The application of CALL had significant impacts on promoting EFL students' autonomy.	CALL can be a match with autonomous EFL learning.

Informed by empirical studies, these topics regarding CALL are to be further investigated in this thesis, and the findings are compared with previous ones. It helps provide a research context of the current study. Investigations of these issues may hopefully reveal the use of CALL and online language learning in a Chinese university context, EFL students' perceptions to it, as well as their engagement in learning in this context.

Using these studies as a point of departure, research questions of this thesis investigate Chinese university EFL students' perceptions and employment of English learning in a CALL context. The synthesis of the existing research scopes the broad research context and provide additional data showing Chinese EFL students' attitudes towards and acceptance of this new technology-supported online learning approach, as well as its impacts on students' language development and learner autonomy.

2.2 Learner autonomy

2.2.1 Learner autonomy and EFL learning

The CALL approach can create a less controlled environment to facilitate language learning, which has been considered as an autonomous art (Quinn, 1974). Reviews of literature on learner autonomy are conducted to help have a better understanding of EFL learning that occurs in a CALL context. Empirical studies have confirmed that learner autonomy can lead to positive outcomes in language

acquisition (e.g., Balçıkanlı, 2008; Little, Ridley, & Ushioda, 2003; Little, 2009; Nakata, 2010; Üstünlüoğlu, 2009). With autonomy, learners achieve their learning goals through means that best suit their individual learning needs and current language levels with less reliance on external instructions (Doğan & Miric, 2017). Learner autonomy plays a role to positively change learners' behaviours in learning activities in long-term development (Nunan, 1995).

A group of English-major students from a Vietnamese university participated in an experimental study for investigating how learner autonomy promoted strategy-based instructions in EFL learning and teaching (Nguyen & Gu, 2013). Ninety-one participants were divided into one experimental group and two control groups. A questionnaire and interviews were employed to collect data. The study concluded that learner autonomy facilitated the development of learners' language skills, as well as related affective and cognitive abilities. This study also suggested a feasible and accessible approach enhancing students' language knowledge and skills through promoting learner autonomy, whose influence is further investigated in this case study contextualized in a Chinese university context.

As Littlewood (2001) has put, the specific learning context may have influence on learner autonomy. In his study, English learners across 11 countries (eight East Asian countries and three European countries) were surveyed. Results showed that

learners in different learning contexts all wished to participate in autonomous language learning, instead of traditional authority-led learning. Whilst there were significant differences among individuals in different countries, learner autonomy was claimed to transcend cultural difference in language learning, though it was always culturally conditioned. It highlights the value of investigating learner autonomy in a specific Chinese university context, of which the culture and society may differ from those surveyed countries' in previous studies.

The Chinese context is relatively new to research on CALL and learner autonomy. In the 21st century, the increasing demand for students' English learning ability has been widely seen in China (Han & Yin, 2016). Traditional in-class EFL learning and teaching can hardly meet the needs. There is a need for students to seek alternative ways for learning autonomously (Yan, 2010). This study explores the role learner autonomy plays in EFL learning in a Chinese university context. It focuses on the facilitation and enhancement of learner autonomy in a CALL environment. The empirical evidence derived from this study will contribute to the existing literature and the subsequent model or framework may be applicable to researching and fostering development of learner autonomy in other similar contexts.

2.2.2 Learner autonomy in a CALL context

As a new approach for language learning, CALL has added new dimensions to the concept of learner autonomy (Blin, 2004). Existing studies have confirmed the use of technologies in language learning and teaching to promote the development of learning autonomy (e.g., Ito et al., 2008; Lee, 2016; Marsh, 2005; Morgan, 2012; Multu & Eroz-Tuga, 2013; Wu, Hsieh, & Yang, 2017; Yang, 2016). Mutual promotion of technology-supported learning and learner autonomy suggests that autonomy can be enhanced in a supportive CALL space (Benson, 2000; Chapelle, 2001).

Forty-eight language learners in Turkey participated in an experimental study, which aimed at investigating their perceptions of and attitudes towards CALL and learner autonomy (Multu & Eroz-Tuga, 2013). Data were collected through a questionnaire, semi-structured interviews, classroom observations, and online learning diaries and logs. Results of the study indicated that CALL could promote learner autonomy among language learners. Learners were also willing to engage in more online extra-curricular learning activities in the future. By employing similar methods of data collection, the current study focuses on a Chinese university context. This will expand the research on learner autonomy and CALL to a larger context, while it may also examine impacts of different social and cultural contexts on learner autonomy.

As shown by previous studies, modern technology provides a context for the development of autonomy though obstacles and problems of autonomous learning are also experienced by students in the process of learning. Therefore, this study is to examine Chinese university EFL students' autonomous language learning in a CALL context from both the positive and negative aspects. Individual differences should be noted in the research, as students may have varied backgrounds and language levels. Their strategies to cope with challenges of autonomy development in a CALL context are also valuable for further studies on EFL learning in similar contexts.

2.2.3 Students' exercise of learner autonomy

Empirical studies have noticed that various factors may impact learners' preparation for and exercise of learner autonomy in language learning practice, such as cultural factors (Dang, 2011; Sert, 2006; Stapleton, 2002), traditional education systems (Fang & Zhan, 2012; Gu & Liu, 2005; King, 2002; Zhu, 2003), and individual differences (Picciano & Seaman, 2009; Twigg, 2003; Zhang et al., 2004). Investigation of factors that have influence on EFL students' exercise of learner autonomy in a CALL context is one of the focal research points of the present study. This hopefully help researchers have a better understanding of learner autonomy, as well as ways to develop learner autonomy in foreign language learning.

A study conducted by Fang and Zhan (2012) explored the development of learner autonomy and the teachers' roles in college English learning and teaching in China. A total of 2,685 non-English major students from nine universities across China participated in the study. Results were generated through a five-point Likert-type scale questionnaire and concluded that teachers were expected to play multiple roles in helping develop learner autonomy in in-class learning, which challenged the traditional pedagogies in China. The large number of participants indicated its findings could be generalized.

In traditional EFL classrooms, a wide range of studies have noticed the influence of the tests on learner autonomy: Dang (2011) suggested that the monitored testing schemes, and EFL students' corresponding preparations and practices, limited the promotion of their autonomy in language learning for other purposes; King (2002) indicated that the teacher-controlled and test-oriented learning methods allowed little space for EFL students' autonomy; Xu and Liu (2009) also arrived at a similar conclusion of the limitation of learner autonomy in a Chinese context. Contextualized in a Chinese context, where the test-oriented learning approach has deep influence on language learners (Gu & Liu, 2005; Zhu, 2003), this study explores the development of learner autonomy in a test-oriented context. To add more information to EFL students' learner autonomy, the current study focuses more on an after-class learning environment.

Autonomous language learning is expected to be framed within the range of students' ZPDs. Existing studies have found that carefully designed learning materials, which are in the range of learners' ZPDs, are supposed to promote the development of learner autonomy (Respati, 2013). Kurita (2012) argued that EFL teachers could help EFL students develop language abilities in autonomous learning by providing learning materials of appropriate difficulty. Jung and Lee (2013) indicated in their case study that using appropriate learning materials for EFL students' autonomous learning is necessary for their engagement, or students may withdraw from learning activities.

De Boer (2007) conducted a qualitative study to link the theory of ZPD with learner autonomy in EFL learning. The case study involved the participation of four EFL students and one teacher in Japan. Data were collected from a teacher's classroom observations, students' learning documents and teacher's reflections. Results of the case study implied the importance of social interaction for language learners' autonomy promotion. Learning tasks that were in learners' ZPDs can effectively encourage their autonomous participation in learning activities as well. However, the study focused on young EFL learners, which might limit itself in a specific range. The present one is to focus on Chinese adult EFL students, expanding the range to a broader context, and provide information about autonomy to researchers, teachers and students in similar situations.

Interaction and collaboration enable self-regulation and other-regulation in autonomous learning, which has been studied in Su et al. (2018)'s study. Sixty college EFL students in China participated in this study. A mix method of content analysis and sequential analysis were used for data collection. The study confirmed the contribution of other-regulation to EFL students' collaborative learning. It also noticed that the combination of self-regulation and other-regulation in a CALL context enabled students to achieve higher performance in collaborative EFL learning.

In accordance with the indications made in Su et al. (2018)'s study, interaction has been recognized as a beneficial factor for autonomous language learning, as well as the elevation of learner autonomy (Lantolf & Throne, 2006; Little, 2001; Liu & Lan, 2016; Murphy, 2007; Zhou, 2016). Feng (2015) conducted a case study with a total number of participants including 80 first-year university EFL students and six EFL teachers in China. It was found that interaction with teachers was beneficial to the promotion of students' autonomy in English learning. With teachers' scaffolding, students' own efforts in the process were also found to be necessary for the enhancement of their autonomy. To further explore the effects of peer interaction on autonomous learning, the current study is designed in a similar Chinese university context. This may help have a more complete picture on learner autonomy and interaction in language learning.

These empirical studies reviewed students' experience and exercises of learner autonomy in language learning, and key factors that may impose impacts on such practices. Informed by previous research, the current study investigates learner autonomy from multiple perspectives. It aims to present a picture of Chinese university EFL students' autonomous language learning activities that occur in a new CALL context.

2.2.4 Challenges regarding learner autonomy

Although learner autonomy is beneficial to EFL students' language learning, it is not developed by every student. Findings from previous studies have indicated that EFL students' autonomy is usually limited (Buendía Arias, 2015; Picciano & Seaman, 2009; Twigg, 2003; Zhang et al., 2004). Some challenges, such as information redundancy and individual learning difficulties, also arise for language learners' autonomous learning practices (Chen & Ching, 2011; Khassawneh, 2012; Lak, Soleimani, & Parvaneh, 2017; Zhalehgooyan & Alavi, 2014). Investigation of factors that may impede the exercise of learner autonomy among EFL students, particularly in an online learning environment, is valuable for a better understanding of autonomous online EFL learning and teaching, which is one of the focuses of this study.

Buendía Arias (2015) conducted a comparative study to examine EFL students' learner autonomy in an East Asian cultural background. Three hundred and fourteen Chinese EFL students and 200 Colombian students participated in the study as subjects. A questionnaire and interviews were employed for collecting data. Both qualitative and quantitative methods were used for processing the data. One of the findings from this comparative study indicated that Chinese EFL students lacked learner autonomy in the learning process. They had limited degree of readiness for learner autonomy in English learning. This point is to be further explored in this study from more perspectives, for revealing the actual development of learner autonomy of the same range of participants.

Some recent empirical studies on learner autonomy are listed in Table 2.2 below. These studies have indicated that CALL has provided a positive context for the development of autonomy (Azari, 2017; Leis, Tohei, & Cooke, 2015). In this context, various learning resources, including learning materials (Farrokh, 2018), learning strategies (Kabiri, Nosratinia, & Mansouri, 2018), and teacher scaffolding (Li, 2017), benefit autonomy exercise and promotion. It was also noted that autonomy varies individually in different cultural contexts (Alrabai, 2017; Malik et al., 2017; Tran & Duong, 2018).

Table 2. 2

Summary of other recent studies on learner autonomy in EFL learning and teaching

Source	Context	Findings	Comments
Tran & Duong, 2018	35 undergraduate EFL students in Vietnam	Three categories of factors, personal, academic, and external, impacted EFL students' development and exercise of learner autonomy.	Learner autonomy usually varies individually.
Farrokh, 2018	120 female EFL students enrolled in a language institution in Iran	Teacher's assignments can be guiding for EFL students' autonomous learning.	EFL students are expected to elevate their autonomy gradually from a lower level to a higher one with teacher support.
Kabiri, Nosratinia, & Mansouri, 2018	158 Iranian EFL students majored in English translation in a university	Motivated strategies can promote autonomy in EFL learning and teaching, while students' anxiety might impede the development of autonomy.	Incorporating motivated strategies with autonomous EFL learning will be beneficial to students' language development.
Leis, Tohei, & Cooke, 2015	140 Japanese university EFL students	Smartphones can trigger students' autonomy, and encouraged them to take a more active part in EFL learning.	Appropriate use of modern ICTs and digital devices can promote students' autonomy.

Malik et al., 2017	162 enrolled pre-university EFL students in Malaysia from various countries	The concept of autonomy was applicable for EFL students from various cultural contexts.	Autonomy of EFL students from a Chinese cultural context is needed to be investigated.
Arabai, 2017	630 EFL students from Saudi Arabiaia	A vast lack of awareness of autonomy existed among Saudi EFL students.	Chinese EFL students' awareness of the role autonomy plays in language learning should be investigated.
Azari, 2017	43 university EFL students majored in English language teaching	Weblog can be used as an effective tool for promoting autonomous EFL learning.	Integrating modern ICTs and CALL into autonomous EFL learning is workable.
Li, 2017	25 undergraduate students and their English teacher	Teacher scaffolding helped Chinese university EFL students gradually become self-regulative and autonomous in language learning.	Scaffolding can promote the development of EFL students' autonomy, enabling them to be more active in language learning.

These investigated factors in terms of learner autonomy and EFL learning should be put into a Chinese university context, for further revealing their influence on the development of autonomy of EFL students in the specific learning context. This study is to focus on EFL students' perceptions and employment of learner autonomy for language development in a Chinese context, particularly that occurs in an interactive CALL context.

2.3 Interactive learning

2.3.1 Interactive EFL learning

Interaction has been recognized as a significant contributor to language acquisition, particularly for language learning that occurs in an autonomous context (Ahn & Lee, 2016; Krashen, 1985; Luk & Lin, 2017). In language learning, interaction “is expected to promote negotiation of meaning, and if it does so, this should be beneficial for language acquisition” (Chapelle, 2003, p. 56). Existing studies have confirmed the contribution of interaction to language ability development and knowledge improvement (e.g., Ciftci & Kocoglu, 2012; Craig, 2006; Fujii, Ziegler, & Mackey, 2016; Jahin, 2012; McDonough & Crawford, 2016; Szudarski & Carter, 2016; Tian & Suppasetseree, 2013).

Jahin (2012) investigated the effectiveness of peer interaction on promoting EFL students' writing ability. A total of 40 EFL students in Saudi Arabia participated in

this experimental study, being divided into two groups. A questionnaire and a writing test were employed for collecting data from the two groups. Results from analysis of these data showed that peer interaction had positive impacts on EFL students' writing skill build-up. The current study focuses on a Chinese university context, where EFL students may have different perceptions and employment of interactive language learning.

In recent studies, researchers focus on exploring the use of ICTs to promote interactive learning. In an experimental study conducted in Turkey, Ciftci and Kocoglu (2012) examined the effects of interaction on EFL students' language development with the support of modern technologies. A total of 30 EFL students participated in two groups in the study. Data were gathered via pre- and post-questionnaires, pre- and post-interviews, and participants' written documents. Participants indicated in the study that peer interaction enabled them to focus on learning and practising content in the process. EFL students also displayed positive perceptions of using technology-supported peer interaction in their writing classes. It suggested that technology could be a good tool to encourage EFL students to engage in interactive learning activities. Using modern ICTs to create a friendly and supportive environment may bring about changes to EFL students' engagement in and perceptions of interactive language learning, which is investigated in this study.

2.3.2 Interactive learning in a CALL context

Modern ICTs promote interactive language learning by creating a friendly and supportive environment (Chang & Lehman, 2002; Chou, 2014; Codreanu & Celik, 2013; Wu, Yen, & Marek, 2011). Language learners enjoy their learning experience, as well as outcomes of interactive language learning with the support of distance learning and multimedia resources (Ding, 2016; McCarty, Sato, & Obari, 2017; Promnitz-Hayashi, 2011; Ying, 2002).

Modern ICTs support interactive language learning from various aspects, including reducing costs for both teachers and learners (Abrami et al., 2011; Marzouki & Idrissi, 2017), overcoming time and distance limits (Gava, 2014; Palalas & Wark, 2017), enabling both synchronous and asynchronous interaction (AbuSeileek & Qatawneh, 2013; Beldarrain, 2006; Wu, Yen, & Marek, 2011), and connecting language learners with teachers and peers in a convenient way (Bernard et al., 2009; Castaño, Duarte, & Sancho-Vinuesa, 2014; Lieberman, 2013; Tse-Kian & Neo, 2004). Interaction has been claimed as one of the biggest benefits of technology-supported language learning (Swan et al., 2000).

A study in Taiwan investigated the effects of using ICT to increase EFL students' learning confidence, motivation, and ability (Wu, Yen, & Marek, 2011). A total of 223 university EFL students took part in the case study. A questionnaire was used for

data collection. Analysis of the data in the study indicated that the use of technology could enhance the employment of interaction in English learning, which was found to promote EFL students' learning. The current study employs more methods for data collection to examine the ICTs and students' use for interactive learning in a similar university context in Mainland China. It hopefully adds some information to EFL students' interactive learning in a similar cultural and educational context.

To encourage EFL students to engage in interactive learning, the integration of multimedia technologies into interaction is expected to create abundant learning opportunities (Banados, 2006; Schmid, 2008). Chang and Lehman (2002) conducted a comparative study to investigate EFL students' interactive language learning with the exposure to a number of multimedia learning resources. Three hundred and thirteen EFL students in Taiwan participated in the study. They were divided into two groups: one group was offered technologies to support interaction in the learning process, while the other group was not. Data were collected through a post-test and a motivation survey. Results showed that technology-supported interactive learning effectively assisted students in enhancing their language capacities.

The current study investigates the effects of technology-supported interaction with the integration of multimedia resources on students' language development in a Chinese university context. Interactive learning that occurs in an online CALL context

is one of the key theoretical constructs of this study. It provides some insights of the practice of this new language learning approach to serve the learning needs of Chinese EFL students.

2.3.3 Teacher–student interaction and peer interaction

Both types of interactive language learning, teacher–student interaction, and peer interaction, have been confirmed to contribute to language students’ ability development and knowledge improvement, as well as their learning experience (e.g., Bloch, 2002; Hung, Young, & Lin, 2015; Wang, 2014; Soler, 2005; Suh, 2005).

Interactive learning with peer learners is described as a learning approach that is “engaging, challenging and interesting” (Wang, 2014, p. 389). Studies have found that peer interaction employed in EFL students’ learning process makes learning interesting and attractive, encouraging students to take a more active participation in learning (e.g., Fuji & Mackey, 2009; Ishikawa, Tsubota, & Smith, 2016; Liang, 2010; Peterson, 2012; Putera, Latief, & Saukah, 2016). Learning from previous studies, peer interaction is investigated in the current one, for the purpose of revealing its influence on EFL students’ perceptions of language learning, as well as on their engagement in interaction that occurs in a new CALL context.

Suh (2005) conducted a study to investigate the effectiveness of peer interaction on EFL students’ writing improvement. Data were collected via a questionnaire and

journal writing from six college EFL students in South Korea. Results indicated that peer interaction could be an appropriate, effective tool to promote EFL students' writing performance. EFL students also considered it as an interesting approach, which motivated them to take a more active engagement in learning activities. Interaction to motivate EFL students' engagement in learning needs more investigation in a Chinese university context. Whether Chinese EFL students have positive perceptions of this learning approach should be also examined, for revealing its employment in this educational system.

Another study focused on the employment of a peer interaction community to promote the development of EFL students' learning motivation in the online context (Razak, Saeed, & Ahmad, 2013). Twenty-four EFL learners in Arab countries participated in the study by being enrolled in an online interactive community. A questionnaire and the records of participants' interaction exchanges in their learning process were used as instruments for data collection. Results of this case study indicated that language learners could be motivated by peer interactive activities in their learning process. L2 learners also perceived that their English language skills were enhanced by engaging in interactive learning practices.

Moreover, Hung, Young, and Lin's study (2015) conducted in Taiwan also investigated the effects of peer interaction on EFL students' motivation to achieve

their learning goals. Thirty EFL students participated in this experimental study. Data were collected through surveys, interviews, observations and video-recordings. Both qualitative and quantitative methods were employed to analysis these gathered data. Results indicated that peer interaction, including collaborative and competitive interaction, could effectively enhance EFL students' performance in English learning. For those disadvantaged EFL students, peer interaction motivated them to actively engage in learning.

These studies suggested that EFL students with different language levels, and different education backgrounds, may have different views of peer interaction, leading to different engagement and outcomes of learning as well. Interactive learning may motivate these students in different ways with different outcomes as well. This study needs to take EFL students' individual differences into consideration when investigating their perceptions of and engagement in peer interactive learning, which contributes to a deeper understanding of it through more information about this approach.

Teacher involvement in interaction is important to language learning (Ahmad, 2016; Bloch, 2002; Miao, Badger, & Zhen, 2006; Soler, 2002). Teacher–student interaction has been also confirmed to be effective to promote EFL students' language

development, as well as their motivation of learning (e.g., Huang & Hong, 2016; Gray et al., 2005; Goodison, 2003; Kazemifar & Chakigar, 2016; Sharma & Pooja, 2016).

Teacher–student interaction was beneficial to EFL students’ language development, as a study indicated (Bloch, 2002). A total of 120 emails of teacher–student interaction from 26 EFL students were gathered and analysed. Results stressed the importance of interaction between teachers and students in English language learning, particularly after the class. Teacher–student interaction itself was also considered as effective practice of EFL students’ language development. As the study employed limited sources of data, the results might be biased. This study expands the use of tools for data collection, and gathers data from a wider range of participants. It provides more information about teacher–student interaction in EFL learning in a different context of EFL learning and teaching.

Another study focused on the comparison between teacher–student interaction and peer interaction in terms of students’ pragmatic knowledge development (Soler, 2002). Participants of this qualitative study were 24 Spanish EFL students. Pre- and post-tests were employed as instruments for data collection. The study indicated that EFL students’ pragmatic knowledge could emerge from their interaction with both teachers and peer students. EFL students intended to focus more on grammatical and lexical issues in their interaction with teachers. This study shows the difference

between teacher–student interaction and peer interaction, which needs more investigate to reveal their different influences on EFL learning in practice, particularly in a Chinese university context, where teachers may play a different role in EFL education. It should be noted that Asian students usually rely on teachers in their interactive language learning (Liang & McQueen, 1999; Xie, 2016). Since this study focuses on a Chinese university context, it needs more investigation of EFL students’ learning practice with teacher–student interaction from different participant perspectives, for finding out whether these students keep a reliance on teachers in interactive learning.

Actual language learning usually takes place through social interaction (Lantolf, 2000; Liu & Lan, 2016; Zhou, 2016), emphasising the importance of interaction in the process of language acquisition (Chapelle, 2005). The theory of ZPD (Cao & Philp, 2006; Kuo, 2011; Lee, 2007), scaffolding (Chen, 2012; De Guerrero & Villamil, 2000; Storch, 2002), L1 mediation (Guk & Kellogg, 2007; Kang, 2005; Yang, 2006; 2014), and imitations (Chang, 2015; Sasaki & Takeuchi, 2010), which are largely underpinned in the framework of SCT, have been found to be closely related with interactive language learning.

2.3.4 Resources in interactive learning

Learning resources that are within participants' ZPD can encourage their engagement in interactive learning activities. In a case study, Morell (2007) discovered that EFL students' participation in interactive language learning is dependent on the degree to which they can understand the topics. Interactive language learning is expected to "relate the academic material with the students' personal interest" (Morell, 2007, p. 236), which allows the social interaction to happen. Findings from empirical studies have arrived at a conclusion that learning materials have influence on students' learning effectiveness, which encourages or discourages them to participate in interactive activities (e.g., Huda, 2017; Lin et al., 2016; McDonough & Crawford, 2016; Sandlund, Sundqvist, & Nyroos, 2016).

Topics that are close to learners' learning and life, bridging learners themselves and learning contents, promote EFL students' engagement and learning (Cao & Philp, 2006; Carrell, 1987; Kim, 2014; Xie, Ferguson, & DeBacke, 2005). While those unfamiliar and difficult materials, which are beyond students' current language levels, often cause trouble to EFL students' learning, driving them away from active participation in interaction (Kuo, 2011; Lee, 2007; Lee & Anderson, 2007; Riasati, 2012). Furthermore, students' familiarity with interaction procedures is also found to promote their participation in learning activities (Wang, 2014). It is advisable for interactive English learning to familiarize students at the beginning stage (McDonough & Sunitham, 2009; Wang, 2014).

A case study conducted by Cao and Philp (2006) investigated the impacts of topic familiarity on EFL students' willingness of communication and interaction in L2. Eight EFL students located in New Zealand participated in the study. A questionnaire, eight classroom observations, six audio records, and interviews were used as instruments for data collection. Results of the case study explored a series of factors that might influence EFL students' participation in interactive learning activities. Among these factors, EFL students' familiarity with topics under discussion was one that had significant impact. It was found from the study that EFL students were more likely to engage in interactive language learning activities that they were familiar with.

To examine the influence of unfamiliar and difficult materials on interaction, Riasati (2012) conducted a qualitative study in Iran to investigate factors that impacted EFL students' willingness to interact and communicate with peer learners in English. Semi-structured interviews were conducted to obtain data from a total of seven EFL students in Iran. Results of the study indicated that the topic of interactive language learning activities was one of the factors that impacted EFL students' engagement in learning. It advocated that interactive learning should introduce learning contents that lie within EFL students' ZPDs. Otherwise they would probably withdraw from learning. In a more complex online learning environment, where

learning resources are varied in difficulty and form, EFL students' participation in interactive activities may vary accordingly, which is to be examined in this study.

In addition to learning materials, scaffolding has also been confirmed as a kind of support resources to facilitate interactive EFL learning: Liang (2010) found that scaffolding encourages the development of EFL writing performance in interactive learning; Min (2006) suggested the positive effects of scaffolding from peer learners on the promotion of English writing quality; Zeng and Takatsuka (2009) indicated that scaffolding in computer-mediated learning contexts could enhance EFL students' language learning; Lan, Sung and Chang (2007) found that the employment of mobile devices could promote the peer-assisted learning, which motivated EFL students to engage in reading practices; Galaczi (2008) confirmed the effects of scaffolding on the increase in EFL students' ability in speaking; Ducasse and Brown (2009) indicated that EFL students could develop their language abilities, particularly speaking, through interactive oral practices.

Two combined studies in Japan and Canada focused on the effects of peer interaction on EFL students' language awareness (Sato & Ballinger, 2012). A total of 129 EFL students participated in the two studies. Data were gathered via students' responses to learning tasks and audio recordings of their learning activities. Results showed that language awareness could be enhanced through EFL students' mutual

scaffolding in interaction, which benefited their English language development as well. It encourages this study to examine the influence of scaffolding on interaction in a Chinese university context. It needs an examination of how peer students scaffold each other during their interactive learning process via the Internet, which may help gain a better understanding of the online interactive EFL learning.

Enlightened by these reviewed studies, the current one investigates the impacts of different learning resources, including topics, cultural and historical materials and scaffolding, on EFL students' perceptions of and engagement in interactive learning. This study contextualizes the investigation in a CALL context with a view to gaining more information on interactive language learning in the current time, particularly from students' perspectives, which is one of the major aims of the study.

2.3.5 Students' perceptions of interactive learning

As a widely accepted learning approach for language development, interactive learning is usually treated by EFL learners in different ways: some make it an opportunity for expressing personal views in target language, which fulfils their needs of self-expression, and improves their language abilities through sharing and exchanging ideas (e.g., Lin et al., 2016; Moradan & Ahmadian, 2016; Nassaji, 2003; Yang, Yeh, & Wong, 2010); while some view interaction as "showing off" and refuse

to actively engage in interactive activities (e.g., Chik, 2008; Jackson, 2003; Kim, 2004; Malko, 2006; Peng, 2012; Wu, 1993).

Existing studies have indicated that interactive language learning can be an opportunity for fulfilling EFL students' needs of self-expression, which contributes to English language knowledge construction and development (e.g., Barab & Duffy, 2000; Huang, 2011; Saeed & Ghazali, 2017). In self-expression, expressing ideas, sharing opinions, and exchanging views in interactive learning are some key activities that help students develop their language abilities and knowledge (Flyvbjerg, 2001; Vurdien, 2011). EFL students absorb language knowledge and practice language skills through view-making in interactive activities (Alptekin, 1993; Chlopek, 2008; Rodliyah, 2016).

A study focused on computer-supported online interaction in English learning (Rodliyah, 2016). Data were gathered via students' journal entries from 16 EFL students through a Facebook closed group. The case study indicated that EFL students actively engaged in online interaction to express and exchange ideas by using the target language, leading to development of their language abilities.

Another study was conducted to investigate the effects of verbal interaction in EFL learning on motivating students to express their personal opinions (Huang, 2011).

Twenty-five EFL learners participated in the study as subjects. Classroom observations and qualitative analysis of classroom videos were used for gathering data. The case study indicated that EFL learners benefited from interactive activities in the classroom by participating more actively in view-making. EFL learners were also found to enjoy the interactive learning activities in the process. The current study puts the focus on the out-of-classroom learning. It investigates EFL students' self-expression via different ways, and to different audiences. It may yield insights of interaction that occurs in a new context.

Meanwhile, empirical studies also pointed out the interaction sometimes induces language learners' negative perceptions: Yan and Horwitz (2008) indicated that interaction is to "show off" EFL students' language abilities and knowledge, which should be avoided by EFL students, particularly in the classroom; Liu (2005) suggested that EFL students, particularly those from Asian countries, usually select to be modest about their foreign language abilities in the classroom; Peng (2012) added that these EFL students intend not to display their language learning achievements to classmates; Kim (2004) suggested that EFL students in Korea are taught to "never show off and stand out from the group" in English learning, leading to a decrease in interaction engagement (p. 5); Chin (2002) also had a similar opinion on EFL students' displaying of learning endeavours.

Jackson (2003) investigated business students' learning in a bilingual context. A total of 589 business school students in Asian countries participated in the case study. A survey and interviews were used to gather data. Results of the study indicated that students avoided using English language actively in interactive learning, as it was described to be "boastful". They attempted not to be labelled as a show-off in interactive learning, which negatively affected their participation in learning activities. It also influenced their presentations in a discussion with peers. They always tried to use a few words to express their ideas, instead of a complex answer.

Studies indicate that displaying learning achievements is treated as motivation for students to engage in interactive language learning, rather than being avoided by them: Simon-Maeda (2004) suggested, for some EFL learners, displaying achievements in a foreign language is a strong motivation to put effort in learning; De Haan (2015) advised that EFL learners with advanced language levels intend to employ interactive activities to show off their language knowledge to peers and teachers; McBride (2008) indicated that showing off encourages EFL learners' engagement in interactive activities with peers in the learning process; Qashoa (2013) found that interactive learning happens as some EFL learners need such opportunities to display their language achievements in front of their peers. Interactive language learning improves EFL learners' motivation to engage in learning by providing them an opportunity to display their learning outcomes (Brown, 1994).

Chik (2008) conducted a study to explore native English-speaking students' learning in EFL classrooms. Their interactions with local Cantonese-speaking students in the classroom were investigated as well. Two informants participated in the study as subjects. Data were collected via semi-structured interviews, guided by open-ended questions, with the two participants. Qualitative methods were used to analyse the data. It was found from the study that native English-speaking students were viewed as competitors, rather than collaborative partners in peer interaction in the classroom. Thus, they employed interactive learning activities to display their language abilities, in order to earn peers' respect. They also got chances in the classroom to interact and collaborate with peers by displaying their language talents.

Chinese EFL students' attitudes towards using English in interaction is worthy of investigation, since it is usually viewed as a showing-off behaviour in Chinese society (Lee, 1999; Xiao, 2006). Whether displaying learning achievements to peer students encourages or discourages them to engage in interaction remains a question among modern Chinese university EFL students, particularly in an online autonomous learning context. It is one of the focal points of research on interactive EFL learning in this study.

2.3.6 Challenges and strategies in interactive learning

Students usually face some challenges in interactive language learning, a major one of which is foreign language anxiety. Foreign language anxiety refers to “the feeling of tension and apprehension specifically associated with L2 contexts, including speaking, listening, and learning” (MacIntyre & Gardner, 1994, p. 284). Fear of negative evaluation, sometimes from EFL learners themselves, is a component of foreign language anxiety in interactive learning (Yan & Horwitz, 2008). Language learners, who fear negative evaluation, usually “tend to sit passively in the classroom, withdraw from activities that can increase their language skills, and may even avoid class entirely” (Gregersen & Horwitz, 2002, p. 562-563). Similar conclusions have been also made in other existing studies (e.g., Al-Khasawneh, 2016; Liu & Jackson, 2008; Melchor-Couto, 2017; Thompson & Khawaja, 2016; Trajtemberg & Yiakoumetti, 2011; Spratt, Humphreys, & Chan, 2002).

A study revealed that a lack of confidence from foreign language anxiety kept EFL students from actively taking part in interactive English learning (Yan & Horwitz, 2008). A total of 532 EFL students in China participated in this case study. A questionnaire and semi-structured interviews were used for gathering data from these subjects. Qualitative approaches were employed to process data. The study indicated that foreign language anxiety, together with other personal and instructional factors, impeded the development of language abilities of EFL students in China. It also kept

EFL students from interacting with peers and teachers in English language in their learning process.

Another study conducted in a Chinese context indicated that foreign language anxiety prevented EFL students from actively participating in interactive learning activities in the English learning process (Liu & Jackson, 2008). A total of 547 undergraduate non-English major students in China participated in the study. A questionnaire was used as the instrument for data collection. Results showed that most EFL students were willing to participate in interactive language learning activities. However, foreign language anxiety impeded their engagement in learning practices.

These empirical studies focused more on EFL learning and teaching in a traditional context. Whether EFL students have foreign language anxiety in a low-stress online learning context remains a question, which is to be investigated in the current study. It also examines the influence of anxiety on students' perceptions of and engagement in learning activities.

To cope with foreign language anxiety, as well as other factors that may prevent them from interaction, anonymity is used in interactive language learning, particularly in an online context (AbuSeileek, 2007; Connolly, Jessup, & Valacich, 1990; Li, 2013; Lu & Bol, 2007). Anonymity encourages a wider range of students to participate in

peer interaction, through providing language learners with a sense of protection and privacy (DiGiovanni & Nagaswami, 2001; Guardado & Shi, 2007; Melchor-Couto, 2018; Shahbaz, Khan, & Khan, 2016; Sullivan & Pratt, 1996).

Empirical studies have stressed the usefulness of anonymity in Asian contexts (Hosack, 2004; Miyazoe, 2008; Miyazoe & Anderson, 2011). As a study focusing on Chinese contexts, where EFL students are often shy to use English language for communication and interaction (Chen & Goh, 2011; Liu & Jackson, 2008), their perception and employment of anonymity for online interactive learning are examined in this one.

Some studies have also pointed out the drawbacks of anonymity, and its potential harms to foreign language learning: Bump (1990) suggested that anonymity may discourage a sense of community; Kavaliauskienė, Anusienė, and Kaminskienė (2007) discovered that in English classes, anonymity does not play a significant role in impacting students' learning and performance; Miyazoe and Anderson (2011) indicated that anonymity may impede language learning since it allows students to misuse the freedom in the learning process; Beaudoin (2002) pointed out that students may keep lurking, instead of engaging in learning activities, by being covered by anonymity in interactive learning; William, Harkins, and Latané (1981) also

confirmed that members in interaction intend to contribute less effort when they are anonymous.

A recent study was conducted to investigate the use of anonymity in online foreign language learning to develop learners' oral interaction (Melchor-Couto, 2018). Eighteen undergraduate students, who were studying Spanish in a university in London, participated in the study. Questionnaires and tests were employed for data collection. Results of the study indicated, however that, there was no correlation between students' foreign language anxiety and the use of anonymity.

While Bond (2002)'s study proposed a different indication, which claimed that the use of anonymity reduced students' foreign language anxiety in online learning. Twenty-two ESL students learning in the online language school participated in the study as subjects. Data were gathered through participants' responses to the survey, feedback from teachers, and observations. The case study indicated that anonymity protected ESL students from humiliation during their learning process, encouraging them to take an active part in learning activities. However, it was also found from the study that some drawbacks, such as misunderstanding between peer learners, non-participation, and a lack of error corrections, might also occur because of the use of anonymity in language learning on the Internet.

These empirical studies inform the present one to further investigate the use of anonymity, and its impacts on EFL learning, in a Chinese university context. Results of this study should be compared with those from previous ones, to reveal the effectiveness of anonymity. It is also expected to help researchers gain more information about foreign language anxiety, particularly that in a new online learning context.

Peer distraction is another challenge faced by EFL students in interactive learning (Godwin et al., 2013). Peer distraction refers to students putting their attention on interacting with peers, instead of on learning tasks (Godwin et al., 2013). It occurs as a common phenomenon in interactive learning that prevents students from fully engaging in learning activities (Chou, 2014; Christiansen & Koelzer, 2016; Hwang et al., 2016). It has been recognized as a disrupter of learning, particularly when modern technologies are involved in (Fang, 2009; Yunus, Salehi, & Chen, 2012).

Chou (2014) investigated the effects of multimedia resources on enhancing young EFL learners' learning. A total of 72 young EFL learners from Taiwan participated in the case study. Qualitative data were gathered via classroom observations and semi-structured interviews. Quantitative data were obtained via pre-and post-tests and a questionnaire. Results of the study indicated that peer distraction was common among young EFL learners in the learning process. When employing interactive

learning activities for language development, EFL learners were easily distracted by peers. Whether adult university EFL students are distracted by peers when learning with multimedia resources needs more investigation, which is one of the focuses of this study.

In another study, Yunus, Salehi, and Chen (2012) examined the strength and weakness of technology-supported interactive language learning for English writing practices. A total of 15 students participated in the study via the Internet. Three open-ended questions were employed, and participants' interactions were recorded to present the data. The case study showed that distraction caused by peers was widely recognized as one of the weaknesses of technology-supported interactive language learning. Peer distraction was considered to impede language learners' development. Besides peer distraction, the use of modern technologies in interactive learning may also bring about some other harms to EFL learning, which is to be further examined in the current study in a similar cultural context.

Different voices have also been heard from empirical studies about learning attention in foreign language learning and teaching. A wide range of studies have indicated that peer interaction in an online context helps EFL students focus on learning activities, instead of distracting them from tasks (e.g., Berg, 1999; Jahin, 2012; Peng, 2010; Sun & Chang, 2012; Tsui & Ng, 2000; van Lier, 1996). As these

studies have put, peer interaction calls for students' attention, preventing them from being distracted by non-learning issues (Swain, 2000). In an online learning context, which contains a wide array of distracting elements, peer interaction plays a more important role in drawing learners' attention to the learning contents (Liang, 2010; Yeha & Lob, 2009)

As there are not many literatures on peer distraction in online EFL learning, and fewer in a Chinese university context, this study investigates interactive EFL learning and the potential distraction caused by interaction. It may be able to probe into one of EFL students' concerns in interactive learning and to provide some references to studies in a similar context.

L1 mediation has been argued to impact students' engagement as well as outcomes in interactive language learning (El-Dakhs, Elhajj, & Al-Haqbani, 2018; Lee, 2016; Noor'Izzati, 2016). Some have claimed that the use of L1 in EFL/ESL learning impedes the development of target language, which should be paid attention to in the learning process (e.g., Guk & Kellogg, 2007; Kang, 2005; Storch & Aldosari, 2010). It harms EFL students' language learning as interference by reducing the effectiveness and efficiency of the use of a target language learning (Liao, 2006; Liu & Shaw, 2001; Watcharapunyawong & Usaha, 2013).

Studies point out that the use of L1 in interactive language learning contributes to EFL development: Swain and Lapkin (2000) indicated that treating the use of L1 completely as a disrupter of L2 learning fails to recognize the language as a cognitive tool of knowledge construction; Lantolf and Thorne (2006) concluded that both L1 and L2 could play a mediation role to facilitate language learning; Yang (2006; 2014) suggested that the use of L1 could facilitate EFL students' English language development in interactive learning activities; Zhao (2010) argued that the use of L1 promised the success of peer interaction in EFL students' learning activities; Villamil and Guerrero (1996) also indicated that L1 was used as one of the five major mediating strategies in interaction, which served the needs of foreign language learners.

A study was conducted to investigate the role of L1 in EFL students' interactive learning activities (Storch & Aldosari, 2010). A total of 15 pairs of EFL students, whose L1 was Arabic, participated in the case study. Three jigsaw tasks, composition and text-editing, and audio-recorded peer interaction served as instruments for data collection. Results of the study showed that there was a modest use of L1 in EFL students interactive language learning activities. EFL students employed L1 for private speech in the learning process occasionally, instead of focusing entirely on learning tasks.

Another case study confirmed the contribution of L1 to EFL students' language skill build-up (Yu & Lee, 2014). A total of 22 Chinese EFL students participated in the study as subjects. Participants' written documents and interviews were employed for obtaining data. The study revealed that L1, together with L2, could be a mediating artefact in EFL students' language knowledge construction. It improved students' understanding in peer interaction. Both L1 and L2 were considered as important tools that facilitated EFL students' language learning.

These studies enlighten the investigation of the use of L1, and its influence on language development in an online learning context from different perspectives. It adds some information to current knowledge about the role L1 plays in foreign language learning, as well as encourages Chinese EFL learners and teachers to treat L1 in a reasonable way.

Imitation is a key concept in the framework of SCT that learners can employ as a strategy to develop their language abilities and knowledge (Vygotsky, 1978). Through imitating others' use of the target language, a language learner can develop abilities and knowledge (Strandberg, 2006). It commonly happens at the early stage of language learning, by which a learner begins to construct his or her own language knowledge (Lantolf, 2005). Lantolf (2006) further treated imitation in the language learning process as a complex and transformative activity, which helps learners

internalize linguistic knowledge, instead of a mere repetition of what language experts say. Imitation not only improves learners' language skills and knowledge, but also develops their metacognitive awareness (Berggren, 2013). Existing studies have found that imitation in interactive learning activities is preferred and adopted widely by EFL students (e.g., Alnasser & Alyousef, 2014; Alrajhi & Aldhafri, 2015; Chang, 2015; Sasaki & Takeuchi, 2010).

A case study in Japan focused on EFL students' imitation in interactive language learning in an online context (Sasaki & Takeuchi, 2010). A total of 10 EFL learners in Japan participated in the study. Participants' online logs, a post-test, a questionnaire and interviews were employed to serve as instruments for data collection. Results of this study indicated that English vocabulary learning took place via interaction by various processes, among which imitation was an effective and preferred one. The study also encouraged EFL learners to integrate various processes and multiple learning resources, including imitation, to maximize the effects of vocabulary learning in interactive contexts. It shows the success of using imitation as a learning strategy in an online environment, which inspires the current study.

Another study in Taiwan explored the effects of EFL students' imitation of teachers' modelling in peer interactive learning on their writing skill build-up (Chang, 2015). Twenty-seven EFL students in a college participated in the case study as

subjects. Participants' written documents were employed as sources of data. Both descriptive statistics and referential statistics were used to process the collected data. The case study indicated that EFL students enhanced their review skills, as well as target language abilities, through imitating teachers' modelling in interactive learning activities. The use of complementary tools, which were produced by teachers, was also recommended. It suggests the importance of teacher involvement and modelling in interactive language learning. EFL students' expectations and perceptions of teachers in online interactive learning need to be examined in the study, which may provide more information about the role the teacher is playing in interactive EFL learning.

The following table summarises some recent empirical studies on interactive EFL learning. Research focuses have been put on the effectiveness of interactive learning on students' language ability and knowledge development (Aubrey, 2017; Minalla, 2018; Mohammadzamani & Taki, 2018; Xu & Kou, 2018). These studies have also showed that interactive learning could be promoted and enhanced through the incorporation of modern ICTs (Hwang, 2018; Wang & Liu, 2018; Wu, Hsieh, & Yang, 2017). Some challenges, such as meaning negotiation (Xu, 2018) and intercultural interaction (Aubrey, 2017) of the approach, have also been noted in these studies.

Table 2. 3

Summary of other recent studies on interactive EFL learning

Source	Context	Findings	Comments
Mohammadzamani & Taki, 2018	80 EFL students from Iran	Interaction had significant influence on EFL students listening skill improvement.	Incorporating complete input-output cycle with interaction will be worthy for EFL students' listening skill practice.
Minalla, 2018	30 undergraduate EFL students in Saudi Arabia	Interaction via voice messages can be more beneficial to EFL students' verbal abilities than that via text messages.	Digital devices may have different influence on EFL students' language development regarding the different ways to use them.
Hwang, 2018	103 university EFL students in Korea	EFL students in Korea actively participated in interaction and communication in English language via mobile phones. They also benefited from these interactive learning activities for EFL development.	Modern ICTs and digital devices can be effective tools for supporting interactive EFL learning.

Xu & Kou, 2018	72 second-year non-English-major undergraduate students in China	Strategic interaction contributed to EFL students' oral performance. They were also expected to have cognition about strategies regarding interaction before employment.	Interaction is needed to be employed for EFL learning and teaching together with corresponding strategies.
Xu, 2018	48 EFL university students in China	Meaning negotiation was not common in interaction among Chinese EFL students.	Interactive EFL learning activities are of various types, not all of which are suitable for Chinese university EFL students.
Aubrey, 2017	42 Japanese EFL students and 21 international students who were native or highly proficient English-speakers	Intercultural interaction encouraged EFL students to engage in target language use more actively.	Exposure of students to intercultural interaction and authentic language resources should be taken into consideration for EFL learning and teaching.
Wu, Hsieh, & Yang, 2017	50 English-major sophomore EFL students in Taiwan	Online learning community facilitated interactive learning, which contributed to the development of students' oral proficiency.	Integrating interactive EFL learning into a CALL context, with the support of modern ICTs, is worthy of

Wang & Liu, 2018	84 first-year undergraduate EFL students in China	The task-based flipped model in the classroom had significant contributing effects on enhancing EFL students' communicative competencies.	<p>consideration for EFL education in the current time.</p> <p>Whether the impacts of flipped model on EFL students' language abilities in a CALL context is consistent with that in the classroom should be further investigated.</p>
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The current study is inspired by literature to further investigate Chinese university EFL students' autonomous interactive language learning in a new online context. Factors mentioned in empirical studies that may impose impacts on their engagement and learning outcomes are also examined. The incorporation of ICTs into interactive learning, and its influence on EFL students' perceptions and engagement, are the focal points of this study. This study aims at providing more information about the effectiveness of interactive language learning on promoting EFL students' language knowledge and abilities to a higher level in their ZPDs.

2.4 Zone of Proximal Development

2.4.1 ZPD and EFL learning

Zone of Proximal Development (ZPD) is defined as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers” (Vygotsky, 1978, p. 86).

Initially working in the field of children’s education, ZPD was expanded beyond its boundary to foreign language education, and demonstrated its constructive and instructive functions (Lantolf, 2013; Lantolf & Poehner, 2008; Lantolf & Thorne, 2006). ZPD is one of the prominent theories regarding learning and teaching within the SCT framework (Antón, 2014; Lantolf, Thorne, & Poehner, 2015). ZPD is used as a theoretical construct to inform the investigation of the foreign language knowledge construction of Chinese university EFL students in a sociocultural context in this study.

Empirical studies have indicated that language learning occurs within a learner’s ZPD through social interaction via various mediations (e.g., de Guerrero & Villamil, 2000; Hidri, 2017; Xu, Gelfer, & Perkins, 2005; Zeng & Takatsuka, 2009). Within learners’ ZPD, social interaction and collaboration make it possible for them to gradually move from a lower language level to a higher one (Khaliliaqdam, 2014). Interactive language learning, which enables learners to collaboratively “engage in

problem solving and knowledge building” (Swain, 2000, p. 102), is a key form of such social interaction, and plays a role in facilitating language development (Lantolf, 2013; Ohta, 2000).

As for language learning, a learners’ linguistic knowledge improves through social interaction within the ZPD with the involvement of a novice and a knowledgeable expert (e.g., Kaivanpanah & Rezaee, 2017; Lan & Liu, 2010; Nassaji & Cumming, 2000; Rassaei, 2017). Peer interaction, where all participants are equal and similar in abilities and knowledge, can be also effective in promoting learning that occurs in their common ZPDs (e.g., Antonio & David, 2017; de Guerrero & Villamil, 2000; Kim, 2017; Ohta, 2000; Xu & Li, 2017).

Harasim (1993) and Riel (1993) predicted that online learning has the potential to help learners reach their individual ZPD through collaboration and interaction. Recent studies have confirmed the successful applications of modern ICTs to interactive learning that occurs in students’ ZPDs: Aseri (2017) found that young EFL learners actively engaged in language learning with the support of ICTs, and had positive experience of interaction; Malmir, Rajabi, and Halaji (2016) confirmed the positive impacts of online tools for developing EFL learners’ vocabulary acquisition through social interaction; Li and Zhu (2013) found that EFL students could have better learning performance and achieve better learning outcomes within ZPD by

collaborating and interacting with others via the computers, than they did individually; Jeong (2016) confirmed the effects of web-based collaborative learning within ZPD on EFL students' writing skill build-up.

A technology-enhanced language learning model, which was inspired by Vygotsky's ZPD and the concept of mediation, was investigated in a study (Phadvibulya & Luksaneeyanawin, 2008). The model provided students with a range of interactive content-based instructions in a community of practice. A total of 143 EFL students in Thailand participated in the study by learning English online. Pre- and post-tests and learning observations were employed as instruments for data collection. The study indicated that online content-based learning, which was designed to fit in learners' ZPDs, supported EFL students' language development. Both students and teachers did well to take advantages of technologies for language ability improvement. Distance interactive learning was also found to provide them with a positive learning experience. It shows that the designs and selection of learning materials in technology-supported language learning should be framed in students' ZPD.

Another study investigated EFL students' communication and interaction in a technology-supported project-based learning environment (Wu, 2001). Six EFL students from a college in Taiwan participated in the case study. A wide range of data

collection instruments, including a questionnaire, email surveys, instructors' journals, online logs, observations, and interviews, were employed in the study. It was found from the investigation that EFL students could learn more productively within their ZPDs through interacting with peers. The mediation role of online learning contents also benefited students' language knowledge construction.

Developed from previous studies on related fields, the current study investigates EFL learning contextualized in a technology-supported context in China with the theory of ZPD as one of its theoretical constructs. The study is expected to add some empirical data to literatures on EFL students' learning in their ZPDs, particularly the development of ZPD in a new online environment.

2.4.2 Learning resources in ZPD

Besides peers and teachers, learning materials that are within learners' ZPD also play a role as mediators to increase the effectiveness of language learning (Ash & Levitt, 2003; Hung, 2009). Empirical studies have confirmed the positive outcomes of using appropriate learning materials to promote foreign language learning (e.g., Akkas, 2016; Aseri, 2017; Gilakjani, 2016; Kao, 2010; Lee & Mallinder, 2017; Yang, 2006).

With the development of modern ICTs, multimedia learning resources become one of the types of typical mediators for language learning in the ZPD (Hun & Beglar, 2005; Riazi & Rezaii, 2011; Sakka, 2016; Wichadee, 2010). Empirical studies have found that multimedia resources are routine for language learning and teaching (e.g., King, 2002; Kusmayanti & Sari, 2015; Mekheimer, 2011; Yang & Qian, 2017; Zhong & Shen, 2002). Compared with traditional learning materials, multimedia learning resources within EFL students' ZPD often have more attractions for EFL students, providing them with engaging learning experiences (Baghdari, Rad, & Sabzevari, 2017; Chung, 2002; Huang, Chern, & Lin, 2009; Lin, 2016; Miyazoe & Anderson, 2010; Sakar & Ercetin, 2005; Thornton & Houser, 2005).

Kageto, Sato, and Kirkpatrick (2012) employed multimedia technologies to create an authentic language setting for Japanese EFL students. A total of 100 EFL students participated in this case study. Data were gathered via a post-questionnaire and records for autonomous learning activities. The study found that EFL students were satisfied with their daily practice of English language learning. The learning content that were in students' ZPDs also worked well to encourage Japanese EFL students to make a breakthrough in language learning.

Kao (2010) conducted a study to investigate the effects of multimedia learning, which manifested ZPDs as social practice, on self-directed language learning among

less successful EFL students. Twelve university EFL students in Taiwan were recruited as subjects of the case study. Intensive interviews, learning diaries, observations, and debriefings were employed as instruments for data collection. Qualitative methods were used to analyse data. Results of the study indicated that with scaffolding from peers and instructors, these EFL students could achieve their learning goals and reach their ZPDs by using multimedia resources for self-directed learning.

These empirical studies provide some insights of the use of multimedia technologies to facilitate language learning within a learner's ZPD, which have received positive outcomes. It enlightens the present study to further discover the impacts of multimedia resources on language learning in a Chinese university context, particularly on learning in an online autonomous space. EFL students' acceptance of these technology-supported learning resources is to be considered in the study, to provide more information about the integration of this type of mediator into language learning.

Authentic materials for language learning are commonly organized in a multimedia format (Khaniya, 2006; Lin & Chen, 2007). Existing studies have noticed the effectiveness of authentic multimedia materials on the development of EFL students' language skills and knowledge (e.g, Bahrani, 2011; Mardani & Tavakoli,

2016; Mayora, 2009; Rivera, 2010; Sun & Chang, 2012; Taheri, 2016; Wikström, 2016). There are also studies focusing on other aspects of EFL students' language development with the support of authentic multimedia resources, including learning motivation (Bajrami & Ismaili, 2017; Birketveit & Rimmereide, 2017; Florence, 2009), independence and autonomy (Dang, 2010; Hwang, 2005; Ulfiati & Kurniawan, 2016), confidence (Anjarani, 2017; Shadiev, Hwang, & Huang, 2017; Wu, Yen, & Marek, 2011), and intercultural communication (Berramdane, 2017; Kilickaya, 2004; Kohn & Hoffstaedter, 2017).

Videos are one of the common forms of multimedia resources in language learning. They are generally defined as the selection of messages in an audio-visual form (Wang, 2012). Empirical research has been conducted to investigate the use of video-based learning, and confirmed its positive promotion of learners' foreign language development (e.g., Canning-Wilson & Wallace, 2000; Chen, 2012; Hayati & Mohmedi, 2009; Huang & Eskey, 2000; Hwang & Huang, 2011; Lin, 2016; Lin & Tseng, 2012; Park & Jung, 2016; Saito & Akiyama, 2018). Video-based language learning is a major approach for EFL development (Ahmad, 2016; Hung & Higgins, 2016), which is also the research focus of the current study.

Perez, Peters, and Desmet (2013) conducted a study to examine the effectiveness of captioned videos in learning French as a second language. A total of 226 university

students in Belgium participated in the research. Questionnaires and measurable tests were used for collecting both qualitative and quantitative data. Data showed that videos facilitated listening comprehension in students' L2 learning. This research suggested that videos with scaffolded materials be used in the L2 learning and teaching that can result in a higher level of comprehension. The current study investigates the employment of scaffolded video resources in a different learning range; that is, EFL learning in China, to reveal the influence of audio-visual materials on foreign language development of EFL students there.

In a Chinese context, a comparative study was conducted by Lin and Tseng (2012) to investigate the use of videos to help students to learn difficult English words (e.g. falconry, jester, derby and revelry). A total of 88 junior high school students in Taiwan participated in the research. Data were collected from pre- and post-test. Three groups of data were generated in comparison of students' performance in learning: one group employed videos as the learning tool, one used texts only, and the last group employed both pictures and texts. Results showed that videos assisted students to best acquire the meanings of these difficult words as well as the understandings of the target language. As participants of this study were young teenagers and their language awareness and development were different from those of adult learners, the current study focuses on adult learners' foreign language awareness and competence development. It expands the range of research on video-based

learning, and provides information about adult EFL learners' language development with the support of digital resources.

Besides its beneficial effects on language learning, video-based language learning has been realized as an attractive learning approach that arouses language learners' interest (e.g., Aburto et al., 2015; Alsulami, 2016; Kabooha & Elyas, 2018; Kim, 2015; Shahid & Ali, 2017; Yarbrough, 2001). While its attractiveness is also considered to impose negative impacts on foreign language learning by distracting students' attention (Göktürk & Altay, 2015; Gülten, 2017; Perez, Peters, & Desmet, 2014; Shahani, Tahriri, & Divsar, 2014), measures that cope with this distraction in video-based language learning are suggested to be employed, particularly in an autonomous environment (Hayati & Mohmedi, 2011; Lin, 2016).

To examine the extent to what L2 learners are distracted by multimedia resources in their learning activities, a study was conducted (Wagner, 2007). A total of 36 L2 students at a university in the United States participated in the study. A language test and videotaped records were employed for data collection. The study suggested that although students spent time on video watching, they did not report being distracted by video materials in their learning process. In addition, videos were also found to be beneficial to L2 learners' comprehension.

The current study investigates EFL students' distraction by using videos and audios in a resource-rich online context. Their strategies to deal with distractions from videos need some attention as well. It helps reveal how these students develop their language abilities in a multimedia-supported environment, and what measures and strategies they use to cope with challenges, particularly in an autonomous context by themselves.

2.4.3 Strategies for learning in ZPD

For learning with multimedia materials that lie in students' ZPD for language development, appropriate learning strategies should be employed. Learning strategies are not inherently good or bad, but depend on their using contexts and corresponding resources (Cohen, 2007; Grabe, 2004). Students' selection and adaptation of a certain learning strategy are always built on the base of their metacognitive awareness (Cohen, 2007; Zhang, 2008). A wide array of learning strategies are deployed by EFL students and teachers to serve EFL learning with multimedia resources, such as traditional ones like skimming, memorizing, dictionary, note-taking strategies, and more recently recognized ones like visual, auditory, meaning-oriented, activation, contextual, and rehearsal (e.g., Ahmad, Muhammad, & Kasim, 2018; Bulushi & Seyabi, 2016; Cohen, 1990; Khojastenejad & Pishkar, 2015; van den Hoorn, 2017; Varasteh, Ghanizadeh, & Akbari, 2016; Zhang et al., 2008).

Bozorgian and Alamdari (2017) conducted a study to investigate the employment of dialogic interaction for promoting EFL students' listening comprehension in multimedia-based language learning. A total of 180 Iranian EFL students participated in this experimental study by being divided into three groups. Data were collected through a questionnaire and listening tests. Results of the study indicated that dialogic interaction improved participants' multimedia listening comprehension, as well as their metacognitive awareness in listening skill in EFL learning. It triggers the idea that multimedia resources can play a contributing role in EFL students' language development when appropriate strategies are deployed. Chinese university EFL students' selection and employment of learning strategies in learning with multimedia resources is investigated in this study.

Task-based learning is a common strategy that is widely used in foreign language learning (Colina & Mayo, 2007). A learning task or a learning problem is always treated as a basic component of language learning by learners (Khaliliaqdam, 2014). Ellis (2003) pointed out that the ZPD is currently conceptualized as task-specific. Learning a foreign language within his ZPD, a learner can employ appropriate language resources, including tasks, for "improving and expanding on their current language capabilities" (Willis, 2005, p. 15).

Empirical studies have noticed that tasks, which are listed as a priority in various learning activities by learners, help them develop their language abilities and knowledge within their ZPDs (e.g., Fallahi, Malayeri, & Bayat, 2015; Hsiao & Oxford, 2002; Naami & Zadeh, 2016; Nahavandi, 2011; Park & Lee, 2018; Rabbani & Jahandar, 2017; Yang, 2003). The employment of learning tasks in EFL learning is further investigated in the current study to find out its influence on language ability and knowledge development in an autonomous online language learning context for Chinese university EFL students.

A study examined the effects of task-based learning activities on EFL students' reading skill development (Nahavandi, 2011). Sixty EFL students participated in the experimental study. Pre- and post-tests were used as instruments for data collection. Quantitative analysis was performed to process the gathered data. Results of the study indicated that task-based language learning can effectively improve EFL students' reading comprehension. Peer interaction and scaffolding also help students complete the learning tasks, for the construction of their language knowledge that lies in their ZPDs.

Another study conducted by Colina and Mayo (2007) investigated the effects of certain types of learning tasks on helping low-proficiency L2 learners to construct language knowledge in their ZPDs. A total of 24 undergraduate EFL students in Spain,

who were divided into three groups, participated in the study. Dictogloss tasks, jigsaw tasks, and text reconstruction tasks were employed for three groups respectively.

Language related episode was used to collect and analyse data from participants' language learning. Results indicated that all three types of learning tasks, which were within EFL learners' ZPDs, were effective for their language development.

These empirical studies inform the current one that different types and topics of learning tasks may lead to different engagement of EFL students, as well as different learning outcomes. This study is to investigate various types of learning tasks, and their effectiveness on EFL learning for Chinese university EFL students. It is expected to provide more information on how these EFL students select and employ different learning resources, including learning tasks, in accordance with their ZPDs and individualized learning situations in an autonomous context.

2.4.4 Student-centred learning in ZPD

With the support of multimedia learning resources and strategies, student-centred learning is playing an increasingly significant role in improving EFL students' language knowledge and abilities (Garrett & Shortall, 2002; Nah, White, & Sussex, 2008; Simpson, 2017). Student-centred learning represents a learning approach where learners own their personalized learning contexts and contents (Campbell & Kryszewska, 1992). The construct of ZPD functions as an instructive and referral tool

for learners to select and organize materials embedding in their ZPDs (Hampel & Hauck, 2004; Miyazoe & Anderson, 2010; Pham, 2012).

In a traditional language learning context, empirical studies have noticed the teacher-centred mode is widely employed in the EFL classroom, particularly in a Chinese context (e.g., Cortazzi & Jin, 1996; Gan, Liu, & Yang, 2017; Hu & McGrath, 2011; Xu, Kok, & Siah, 2017; Zhong & Shen, 2002). The one-way mode is believed to negatively affect some EFL students, leading to some unproductive results for language development (Hu, 2005; Rao, 1996; Rostami, Akbari, & Ghanizadeh, 2015). EFL teachers usually have control of in-class learning, while students can hardly change the learning schedule in the classroom (Littlewood, 2007; Pei, 2008; Zhu, 2003). EFL students only play a passive role in teacher-centred learning contexts (Huang, Hoi, & Teo, 2018).

Compared with the traditional teacher-centred mode, student-centred learning enables students to have exposure to learning resources that lie within their individual ZPD. This point has been widely confirmed in previous studies (e.g., Bañados, 2006; McLoughlin & Luca, 2002; Razak, Saeed, & Ahmad, 2013; Sun & Qiu, 2017; Wang & Shih, 2015; Wright, 2017). The present study is to expand the research range to a broader context that is, the Chinese university context by investigating EFL students' use of online student-centred learning. Comparison of the learning approach and that

employed in a traditional context is made in the study as well, for revealing its impacts on students' learning experience and their learning performance.

A case study conducted in an Asian context examined the technology-enhanced student-centred language learning and its effectiveness on EFL writing skill build-up (Simpson, 2017). A total of 50 undergraduate EFL students in a Thai university took part in the study. Data were collected from participants' written pre- and post-tests. T-Test, ANOVA, and Scheffe were used to process the data. Results of the case study indicated that EFL students, with different levels of language skills and abilities, improved their writing skill significantly via their endeavours with online student-centred interactive learning.

Another study found that student-centred learning contents should take EFL students' current language levels and their ZPDs into consideration, or it would not lead to positive learning outcomes, nor students' preferences (Garrett & Shortall, 2002). They investigated a total of 103 Brazil EFL students via classroom observations, a questionnaire, and documents of participants' learning activities. The case study indicated that EFL students had very negative perceptions of learning contents that were beyond their ZPDs.

These studies inform the current one to take students' ZPDs into consideration when organizing student-centred learning materials, particularly in an autonomous context where teacher monitoring is scarce. The study needs to pay attention to EFL students' feedback to learning contents that are beyond their ZPDs, which may provide more information about the importance of learning materials' appropriate difficulty for student-centred learning activities.

2.4.5 ZPD and self-evaluation

The construct of ZPD also provides a guide for evaluating EFL students' learning performance and outcomes, and promoting their learning activities (Hessamy & Ghaderi, 2014; Saeidi & Hosseinpour, 2011). Modern technologies enhance the evaluation and assessment of learning to better serve the needs of EFL learners and teachers (Alsied & Pathan, 2013; Pishghadam & Barabadi, 2012; Zhang, 2013). It suggests an investigation of evaluation and assessment under a framework of ZPD for EFL students' autonomous learning in a technology-supported environment, which is to be conducted in the current study.

Empirical studies have noticed the effectiveness of assessment on EFL students' learning performance and language ability development both in the traditional learning approach and in a CALL context: Mardani and Tavakoli (2011) discovered the positive impacts of teacher-assessment on Iranian EFL students' reading

comprehension; Kozulin and Garb (2002) asserted that assessment procedure can assist EFL learners to achieve their learning goals and realize their learning potentials in their ZPDs; Teo (2012) employed ICTs to provide computerized dynamic assessment, which also received positive feedback from EFL students; Birjandi and Ebadi (2012) made use of Web 2.0-supported assessment to achieve positive outcomes in developing learners' socio-cognitive awareness as well. Similar encouraging influence of assessment and evaluation on EFL learning can be also seen in a wide range of existing studies, focusing on the development of language abilities, cultural awareness, and communicative competencies (e.g., Birjandi, Estaji, & Deyhim, 2013; Hessamy & Ghaderi, 2014; Pishghadam & Barabadi, 2012; Sadeghi & Khanahmadi, 2011; Saeidi & Hosseinpour, 2013).

Saeidi and Hosseinpour (2013) focused on the employment of assessment procedure as an instructional tool for EFL students' language learning. They explored the mediated-oriented teaching and assessment and its influence on EFL vocabulary learning. A total of 60 undergraduate EFL students participated in the study. Pre- and post-tests were performed to gather data from the two groups of participants. Results indicated that the teacher-controlled assessment procedure can enhance EFL students' vocabulary learning. They were also expected to have better performance in their future language learning practice with the support of a set of assessment procedures.

Whether Chinese university EFL students could incorporate evaluation into their online language learning remains a question. It is to be examined in the present study. It also focuses on how this group of students conduct evaluation, and plan the learning for the next stage on the basis of its outcomes. It consists of an important part of learning in their ZPDs, as well as a reflection of their exercise of learner autonomy.

Some other recent empirical studies on the construct of ZPD, as well as the employment of ZPD and its influence on EFL learning and teaching are summarized and listed in Table 2.4 below. These studies have put the focus largely on the guiding effects of ZPDs to language development (Shokouhi & Pishkar, 2015; Yang, 2016), the uses and challenges of multimedia resources regarding EFL learning and teaching (Hoang, 2015; Lee, 2017), teachers' and peers' assistance within ZPDs (Nicolas, 2016; Qin & Li, 2016), and students' self-evaluation in their language learning process (Yang & Qian, 2017).

Table 2. 4

Summary of other recent studies on ZPD in EFL learning and teaching

Source	Context	Findings	Comments
Yang & Qian, 2017	102 first-year undergraduate EFL students in a university in China	DA can be a strong tool for assessing EFL students' learning, helping them locate their weakness in language development, as well as enhancing their confidence.	Compared with traditional statistical assessment, DA focuses more on the development of EFL students' language abilities, providing information for their subsequent learning plans.
Yang, 2016	8 Chinese university EFL students	Story rewriting that was incorporated within students' ZPD can facilitate the generalization of personal ideas and expressions.	Making personal views and expressing them in public in a target language are usually challenging for Chinese EFL students.
Qin & Li, 2016	20 EFL students and 2 English teachers from 2 classes in a secondary school in China	Teacher's feedback contributed to EFL students' language knowledge construction in their ZPD.	For adolescent EFL students, teacher's involvement in language learning is important. It should be also investigated in an adult EFL learning context.
Nicolas,	6 first-year undergraduate	EFL students had strong willingness to	It should be further investigated whether EFL

2016	EFL students in Japan	provide assistance to their peers when learning in their ZPD, which also contributed to their own performance improvement.	students in China would be involved in peer scaffolding in language learning practice.
Hoang, 2015	15 EFL teachers in Vietnam	Teachers had limited knowledge and uses of multimedia resources for EFL teaching in the university.	Teachers and educators should be trained to keep pace with the development of modern ICTs and CALL.
Lee, 2017	14 young EFL learners in Korea	Creative drama, which was suitable for learners' current language levels, can promote their autonomous EFL learning, and lead to positive learning outcomes.	The use of multimedia resources is confirmed to be effective for language learning, particularly in an autonomous context.
Shokouhi & Pishkar, 2015	85 EFL students in Iran	Collaboration in vocabulary learning that lies in EFL students' ZPD enhanced their learning performance.	Collaboration should be incorporated into EFL learning.

Informed by literature, the current study is to conduct a case study to investigate students' language practice and development within their ZPDs. It focuses on EFL students in a Chinese university, as well as their learning in an online interactive context. Their employment of multimedia learning resources in this technology-supported context, and the challenges they are facing in the learning, are key focuses of this study. The study covers students' self-evaluation, their interaction and collaboration with peers and teachers in language learning, and the scaffolding they provide and receive in the interaction process, are also examined.

2.5 Scaffolding

2.5.1 Scaffolding and EFL learning

The metaphor of scaffolding was raised by Wood, Bruner and Ross (1976) as a sociocultural concept. It originally described the assistance provided by a knowledgeable expert or adult to a novice or child in tutorial interaction within a playful context. Scaffolding “enables a child or novice to solve a problem, to carry out a task or to achieve a goal which would be beyond his unassisted efforts” (Wood, Bruner & Ross, 1976, p. 90). Scaffolding is considered to be associated with the theory of ZPD. As mentioned by Hammond and Gibbons (2001, p. 8), scaffolding “lies very much within a Vygotskian framework”.

Learners can get scaffolding from knowledgeable teachers and more capable peers to promote their learning (Poehner, 2012; Stone, 1993). Scaffolding has been accepted as an effective means of instruction in learning activities as well as a source of support to learning, as learners can leverage the knowledge and skills they obtain to achieve their learning goals (e.g., Ali, 2015; Bataineh & Obeiah, 2016; Cole, 2006; Faraj, 2015; Liu, 2018; Mirahmadi & Alavi, 2016; Pawan, 2008; Soloway et al., 2001; Yang, 2015).

As a case study focusing on the language learning area, the present study employs scaffolding as one of the four constructs of theories to form the theoretical framework.

The study investigates its impacts on EFL learning in a Chinese university context, which adds some diversity to current literatures on EFL learning, particularly to language development in an online environment.

Existing studies have confirmed the effectiveness of scaffolding on enhancing language learners' skill build-up (e.g., Attarzadeh, 2011; Burch, 2007; Nguyen, 2013; Schwieter, 2010; Storch, 2007; Talebinejad & Akhgar, 2015). Scaffolding has also been found to act as a supporter to language learning from various perspectives, such as grammar learning (Khodamoradi, Iravani, & Jafarigohar, 2013; Pishghadam & Ghadiri, 2011; Rauber & Gil, 2004; Suthiwartnarueput & Wasanasomsithi, 2012), vocabulary learning (Atay & Kurt, 2006; Li, 2010; Mizumoto & Takeuchi, 2009), confidence and motivation enhancement (Lan, Sung, & Chang, 2007; Lu, Goodale, & Guo, 2014; Wu, Yen, & Marek, 2011), and self-evaluation (Sai & Hsu, 2007; Trajtemberg & Yiakoumetti, 2011).

Attarzadeh (2011) conducted a quantitative experimental study to investigate the effects of scaffolding on reading comprehension of EFL learners with different language levels. A total of 180 EFL learners in Iran were selected and divided into three groups to participate in the study. A constructivist-interactive model and traditional individual reading were performed in the experimental group and the control group respectively. Pre- and post-tests were used for data collection. Data

were analysed through a two-way ANOVA. Results of the experimental study indicated that the scaffolded reading materials were more effective in promoting EFL learners' reading comprehension. It was also discovered from the study that different types of reading tasks were differently sensitive to scaffolding.

Another study explored to what extent scaffolding can benefit EFL learners in grammar learning in Iran (Khodamoradi, Irvani, & Jafarigohar, 2013). A total of 142 Iranian university students participated in the experimental study. Data collection was achieved through pre- and post-test. Findings of the study indicated that low achievers in EFL learning can benefit more from scaffolding. It implied that learners with different target language levels may have different understandings and expectations of scaffolding, resulting in various achievements. Appropriate strategies were suggested to be employed in the language learning and teaching process that can efficiently help learners achieve their learning goals, which can be evidenced by another study conducted by Pishghadam and Ghadiri (2011).

Whether EFL students with different language levels can use appropriate scaffolding, together with corresponding strategies, to facilitate their own language learning is further examined in this study that focuses on a Chinese university context. It examines EFL students' practices with scaffolding in a resource-rich learning

context as well, where students usually face more choices of scaffolded resources and strategies.

2.5.2 Scaffolding in a CALL context

With the support of modern ICTs, scaffolding has been integrated with digital resources to assist learners in achieving their learning goals (van de Pol, Volman, & Beishuizen, 2010). Empirical studies have indicated that scaffolding is important for learning activities in a CALL context (e.g., Chang, Sung, & Chen, 2001; Hsieh, 2017; Oliver & Herrington, 2000; Rezvani, Saeidi, & Behnam, 2015; Saeed, Ghazali, & Sahuri, 2018; Santoso, 2008; Woo et al., 2011; Yeh, Hung, & Chiang, 2017). EFL students have also displayed preferences for these helpful resources in their learning process, particularly those of multimedia forms (e.g., Nguyen, 2013; Rahimi & Tahmasebi, 2011; Ramnarain, 2012).

Ramnarain (2012) explored the use of multimedia resources, particularly cartoons, as a scaffold for Natural Science students in South Africa. Data were collected through classroom observations and interviews from 42 Grade Nine students and one Natural Science teacher. The study found that technologies were useful for scaffolding learning and teaching. Audio-visual materials were accepted to be efficient in helping learners understand relevant abstract concepts and developing learner autonomy in the learning process.

Besides videos, Web 2.0 technologies can be also applied to language learning. Woo et al. (2011) employed Wikipedia to scaffold young ESL learners' writing. The case study examined the use technologies as scaffolding to develop ESL learners' performance in collaborative writing practices. Thirty-eight ESL students in Hong Kong participated in the study. Questionnaires, weblogs, interviews, and focus groups were employed as instruments for data collection. The case study discovered that young ESL learners had positive perceptions of technology-supported scaffolding. Scaffolding from peers, teachers, and online materials, being transmitted through the Internet, was effective to improve ESL learners' performance in collaborative writing.

The Internet and computers have proved to be a convenient way for receiving and sending scaffolding, as well as providing scaffolding in an attractive form. However, whether adult university EFL students are interested in online scaffolded remaining doubt. The current study is to investigate the point in a Chinese context, which hopefully adds some value to both learners' and teachers' knowledge on the new technology-supported scaffolding.

In a CALL and online learning context, scaffolding not only improves language learners' learning performance and outcomes, but also promotes their autonomy, and encourages them to engage in learning (Croker & Ashurova, 2012). Mariani (1997)

explored the use of scaffolding strategies to promote the development of learner autonomy, and described that: “using scaffolding strategies, and gradually removing them. ... is at the core of the process of learning and teaching for autonomy” (p. 7). The connection between constant scaffolding and the rising level of learner autonomy has been confirmed in various empirical studies (Dang, 2010; Benson, 2006; Smith & Craig, 2013).

A study conducted in Vietnam investigated ways to encourage EFL students to become more autonomous in language learning (Humphreys & Wyatt, 2013). Data were collected from 83 EFL learners in Vietnam via a questionnaire, focus groups, and teacher’s recorded discussions. It was found from the action research that for those students with low level of autonomy, teachers’ scaffolding was expected. It needs to be conducted in a Chinese university context, where EFL students’ autonomy may be different from Vietnam. Whether scaffolding could promote autonomy of Chinese EFL students is investigated in the present study.

Smith and Craig (2013) mentioned that “scaffolding is essential in the development of autonomy” (p. 253), and acknowledged scaffolding’s promotion of language learners’ autonomy in a CALL context. It highlights that scaffolding can be a contributing factor to learner autonomy in online learning. This study is to further explore the role scaffolding plays in Chinese university EFL students’ autonomous

language learning that occurs in an online context, as well as students' perceptions and expectations of it.

2.5.3 Soft scaffolding in EFL learning

Two types of scaffolding, the soft scaffolding and the hard type, are presenting to help EFL students achieve their learning goals. Soft scaffolding comes from real persons, including knowledgeable teachers and more capable peers (Bruner, 1986; Vygotsky, 1978). It is in association with interactive learning. Empirical studies confirm the contribution of soft scaffolding via interaction to students' language development (e.g., Hayati, Jalilifar, & Mashhadi, 2013; Hsieh, 2017; Jalilvand, 2014; Langari, Gorizi, & Rezaie, 2017; Pifarre & Cobos, 2010; Riazi & Rezaii, 2011).

As suggested by Swain (1985), in interactive learning, peer scaffolding works as learners scaffold each other, and they are pushed to produce modified language output via interactive activities. Parga Herrera (2011) found that scaffolding from peers in interactive learning encouraged EFL learners in the classroom. Chang and Sun (2009) indicated that language learners were accepted about peer scaffolding. Nishida (2012) also found that EFL students might be in need of peer scaffolding when facing difficult learning tasks in their autonomous English learning process.

By involvement in interactive learning, EFL learners can intentionally construct their language knowledge via mutual scaffolding within the range of their ZPD (Cheng, 2009). Studies have noticed that peer collaboration and interaction scaffold the development of language abilities (e.g., de Guerrero & Villamil, 2000; Johnson & Johnson, 2000; Lee, 2010; Storch, 2007; Van Lier, 2004). It is widely accepted by language learners in their interactive learning process (Barnard & Campbell, 2005; McDonough, 2004).

Nguyen (2013) investigated the effects of peer scaffolding on EFL students' performance in a collaborative oral presentation task. It also examined how Vietnamese EFL students benefited from peer scaffolding during their English learning process. Data were gathered from 12 EFL students via reflective reports and interviews. Results of the case study indicated that peers' mutual scaffolding positively encouraged EFL students to overcome many challenges in oral presentations. Peer scaffolding was preferred by EFL students in the study. It was concluded that scaffolding can effectively assist EFL students to achieve higher than they can do in an individual context and progress through their ZPDs.

It is noted however, that peer scaffolding is usually neglected by language learners. Empirical studies have noticed that EFL students usually do not know how to provide scaffolding to peers in interactive learning because of a lack of language

abilities and knowledge (e.g., Ashewell, 2000; Hu, 2005, Leki, 1990). Peers are not always regarded as “knowledge authorities” either, leading to less acceptance of peer scaffolding in the learning process (Hanrahan & Isaacs, 2001; Lee, 2017; Riazi & Rezaii, 2011; Strijbos, Narciss, & Dunnebier, 2010). Some EFL students also display a negative attitude towards peer scaffolding in language learning since they doubt its effectiveness and correctness (Ishihara & Chiba, 2014; Patri, 2002; Rezaei, 2012; Roskams, 1999; Ruegg, 2015).

For example, a study conducted by Riazi and Rezaii (2011) revealed that EFL students believed that teachers were a more effective source of scaffolding in EFL learning. The study focused on the effects of scaffolding on EFL students’ autonomous writing practices. Twenty-five EFL students from Iran participated in the experimental study. Pre- and post-tests, audio records and learning logs were used for collecting data. Findings from the study indicated that from students’ perspectives, teacher scaffolding was more effective on promoting EFL students’ skill build-up than peer scaffolding.

Peer scaffolding, as a source of assistance to foreign language learning, is one of the focuses of the present study. It reviews EFL students’ perceptions of and engagement in peer scaffolding, and attempts to find out whether peer scaffolding can help them achieve their learning goals. It also focuses on the way Chinese university

EFL students administer peer scaffolding in an online context. It can reveal more information about this helpful way of language learning, particularly its impacts on learning in a new online context.

Besides peers, teachers are another major source of soft scaffolding in language learning (Davis & Miyake, 2004; Jang, Reeve, & Deci, 2010), particularly for EFL students from Asian countries (Li, 2017; Liang & McQueen, 1999). Teacher scaffolding benefits their language development by providing comprehensible input (Daniels, 1994). Empirical studies have suggested that teachers' involvement and scaffolding, as well as teacher-led instructions, in language learning usually have a positive correlation with students' engagement, leading to productive learning outcomes as well (e.g., Ahangari, Hejazi, & Razmjou, 2014; Ameri & Seyedrezaei, 2015; Gray et al., 2005; Goodison, 2003; Faraj, 2015; Langari, Gorizi, & Rezaie, 2017; Talakoob & Shafiee, 2017; Talebinejad & Akhgar, 2015; Zand-Moghadam & Alizadeh, 2015).

An experimental study focused on Iranian EFL learners' content retention of summary writing in language learning (Ahangari, Hejazi, & Razmjou, 2014). Data were collected from 40 female EFL students via a written post-test. Results of the study indicated that teacher scaffolding had positive effects on the content retention of the EFL learners' writing practices. Scaffolding worked as a strong support for these

learners to achieve higher levels of learning goals. More methods for data collection from wider sources are used in the present study, leading to a closer examination of the effects of teacher scaffolding on EFL learning in a different Chinese context.

Langari, Gorizi, and Rezaie (2017) conducted a study to investigate the effects of teacher scaffolding on EFL vocabulary learning. Data were collected from 108 Iranian high school EFL students via a pre- and a post-test. Results of this experimental study indicated that compared with computers and student themselves, teacher scaffolding can help achieve the best outcomes. It highlighted the contributing role that teacher scaffolding played for high school EFL students. For adult university students, the effects of teacher scaffolding are in need of further investigation, which is a focal part of the current study focusing on a Chinese EFL education context.

Although empirical studies have put focus on the impacts of both teacher and peer scaffolding on EFL learning and teaching across the world, it remains a question how Chinese university EFL students view and employ the two types of scaffolding for their online interactive learning, particularly in an autonomous context. This point is further investigated in the present study. This study also compares the possible differences between teacher scaffolding and peer scaffolding, as well as their varied impacts on language learning. It hopefully will provide some insights of soft scaffolding that occurs in an innovative online EFL learning context.

2.5.4 Hard scaffolding in EFL learning

Hard scaffolding is defined as “static support that can be anticipated and planned in advance” (Brush & Saye, 2002, p. 2). It usually consists of materials in various shapes, aiming at building students’ linguistics knowledge and language abilities from different angles (Kao, Lehman, & Cennamo, 1996; Mardijono, 2012). Hard scaffolding has been considered as an effective tool to develop students’ abilities and knowledge to a target degree within their ZPDs from a lower level gradually (e.g., Ahmed, 2015; Gillies & Boyle, 2005; Ningrum, 2015; Opperman, 2016; Rezaee & Marefat, 2015; Siyahhan, Barab, & Downton, 2010).

Hard scaffolding usually matches with autonomous language learning, being a tool to facilitate EFL students’ self-regulative learning, as well as to support their self-assessment (e.g., Harris, 2007; Luhach, 2016; Mahmoodi, Kalantari, & Ghaslani, 2014; Trajtemberg & Yiakoumetti, 2011). These instructive materials are recognized to be helpful and necessary for autonomous learning, where teachers and peer learners are usually absent (Lan, Sung, & Chang, 2007; Li, 2010).

Hard scaffolded materials can bridge the “learning needs” and the “target needs” (Bastukmen, 2006: pp. 25-26), encouraging learners to close the gaps and achieve their goals in language learning. Learning language with scaffolded materials is

efficient. These supportive materials can reduce students' learning burden and help them focus on learning itself (Ge, Xiong, & Xiong, 2016). Scaffolded materials also help learners have a clear picture of learning contents, understanding what to do and why in the learning process (Lim & Lee, 2007; Nakaya & Murota, 2016). Learners are allowed to have control of their learning process (Leu et al., 2013), and reasonably construct an interaction between themselves and learning content through scaffolded materials as mediations (Chapelle, 2003).

With the evolvement of ICTs and affordable digital devices, scaffolding has been expanded to different forms of tools and resources. Initiated by Coffin (1991), scholars develop a set of hard scaffolding that is embedded within multimedia and hypermedia materials. Empirical studies have confirmed its effectiveness in supporting language learning in a new CALL context, as well as the productive outcomes it helps achieve (e.g., Amine, Benachaiba, & Guemide, 2013; Lee, 2009; Marzban, 2011; Santoso, 2008; Warschauer & Lee, 2012).

Marzban (2011) conducted a study to investigate the combination of ICTs and hard scaffolded materials on the development of EFL students' reading comprehension in Iran. Data were collected from 30 Iranian EFL students via pre- and post-tests. The experimental study discovered that technology-supported scaffolded materials that were carefully fabricated for EFL learners can be used to scaffold

learning with new styles and genres. It was also indicated that scaffolding materials were necessary in a CALL context to enhance students' confidence in learning.

Same in a CALL context, Warschauer and Lee (2012) examined the effectiveness of electronic textual glossing as hard scaffolding on EFL students' learning in digital reading environments. They investigated students' feedback to employment of digital scaffolding tools in their vocabulary learning. A total of 138 undergraduate EFL students in Korea participated in the experimental study. Data were gathered from pre- and post-tests, reading tasks, and interviews. Results of the study indicated that digital scaffolded materials can effectively enhance EFL students' performance, as well as their achievements, in vocabulary learning. Scaffolded materials, in more complex and varied forms, were advised to be introduced into EFL vocabulary learning. It inspires the use of ICTs and multimedia resources for creation and delivery of hard scaffolding, particularly in an autonomous context.

Some more existing studies on the integration of multimedia and hard scaffolding are also reviewed: Johnston and Milne (1995) found that multimedia scaffolding can provide language learners with more precise support for their learning; Saye and Brush (2002) discovered the effectiveness of multimedia scaffolding on language learners' problem solving; BavaHarji, Gheitanchian, and Letchumanan (2014) confirmed the effects of multimedia scaffolding on the promotion of EFL students'

oral productions; Lee (2009) attempted to embed multimedia scaffolded materials in a web-based language learning environment, which eventually received positive learning outcomes; Rusanganwa (2009) introduced a multimedia instrument to EFL vocabulary learning in Rwanda, which contained scaffolded materials in the form of videos, audios, images, and texts.

These empirical studies have triggered the idea that hard scaffolding, particularly those of digital forms, can facilitate EFL students' language learning. The current study is to investigate Chinese university EFL students' use of hard scaffolding, and their perceptions of these resources in their language learning. It also focuses on how these students incorporate scaffolding into their autonomous learning, as well as the role these resources play in the learning context.

Besides supporting language learners' linguistic training, scaffolding can be also used to facilitate language development through broadening learners' horizons, and reducing their learning burden. These are to be investigated in this study on EFL learning contextualized in an online context. Chinese university EFL students' perceptions of scaffolding, and their employment of scaffolding resources to target their learning problems in these two aspects are to be examined. This hopefully adds more information to the concept of scaffolding, and provides a bigger picture of online EFL learning.

Broadening horizons is considered as one of the aims for employing scaffolding in language learning. Studies have confirmed that both soft and hard scaffolding are effective to help learners absorb knowledge from different sources: van Lier (2004) indicated that scaffolding in language learning can provide learners with extra linguistic knowledge via mutual engagement and support, which encourages knowledge expansion and transmission. It frees language learners from their own limits of language information, enabling them to access wider zones. Razak, Saeed, and Ahmad (2013) discovered that language learners can acquire more information and knowledge via peer scaffolding when learning as a group member. Aydın and Yıldız (2014) found that peer scaffolding can add more information to existing knowledge in their collaborative writing practices. Kasper (2000) also indicated that peer scaffolding can be seen as a source of additional knowledge and information in technology-supported ESL learning. Similar findings are also seen in other empirical studies (e.g., Ameri & Seyedrezaei, 2015; Ghazvini & Khajehpour, 2011; Kim, Mendenhall, & Johnson, 2010; Kim, Mendenhall, & Johnson, 2010; Ko, Schallert, & Walters, 2003).

For autonomous language learning, scaffolding can effectively reduce EFL students' learning burden (Saito & Ebsworth, 2004). Studies have noticed the use of scaffolding can provide students with friendly and workable learning by cutting down

the loads of learning; Hayati and Ziyaeimehr (2011) discovered that scaffolding emerging from joint construction tasks can effectively reduce learning burden for members in EFL writing practices; Laksmi (2006) found that peer scaffolding, together with provided encouragement and guidelines, can ease the burden for classmates' proofreading in writing tasks; Nguyen (2013) suggested that scaffolding from peer members in a group of EFL learners can both lift their work burden, and boost their learning confidence; Behroozizad, Nambiar, and Amir (2014) indicated that scaffolding from teachers, particularly related to language learning strategies, can reduce language learners' learning load.

Pazhouhesh and Ghabanchi (2016) conducted a study to explore the use of story maps and audio podcasts to scaffold EFL students' speaking practices. A total of 36 EFL students in Iran participated in the study. A Likert-scale, a questionnaire, and a post-test were used as instruments for data collection. Results of the study indicated that scaffolding could enhance EFL students' performance in language tests, as well as ease their burdens in the learning by providing the context and goal in a more straightforward way. Positive feedback to scaffolding was also received from students in the study.

Cotterall and Cohen (2003) examined how scaffolding helped EFL learners to complete academic essay writing. Participants of the study were 16 EFL learners

studying in a university in New Zealand. Two essays, as pre- and post-tests, were employed for data collection. It was found from the study that scaffolding could reduce the learning burden of learners in essay writing. Scaffolding could effectively help learners accomplish EFL writing. EFL learners were also glad to engage in the scaffolding process, and produced more detailed information in their essays.

These empirical studies trigger the idea that the use of scaffolding, particularly that with technological support, can reduce learning burden, and help EFL students achieve the learning goals. This study further explores the impacts of scaffolding on EFL learning of Chinese university students. It examines scaffolding in a new online context. Results of the study hopefully provide more information about scaffolding, as well as students' learning organization.

2.5.5 Challenges regarding scaffolding

It is noted that there are also different voices about scaffolding and its role in language learning. Empirical studies have indicated that scaffolded might not always facilitate language learning, and can be harmful to language development (e.g., Jiang & Yu, 2014; King, 2002; Lin, 2002; Shahrokhi & Kamyabi, 2016; Smit et al., 2017; Walsh, 2002; Zarandi & Rahbar, 2014). Thus, scaffolding has been should be provided and used in language learning in a careful way (e.g., Clark & Kazinou, 2001;

Dabbagh, 2003; Hmelo & Guzdial, 1996; Izadi & Nowrouzi, 2016; Talley & Tu, 2014).

Scholars believed that once students were habituated with scaffolding, they may become afraid to study language on their own (King, 2002). Similar conclusions have been reached in empirical studies: van Lier (1988) mentioned that too much scaffolded may impede the development and emergence of self-repair, a crucial activity for elevating autonomy in the learning process; Imani and Farahian (2016) believed that excessive relying on teacher scaffolded might lead to a decrease of proficiency in the target language, as well as increasing dependence on their native language; Apple and Kikuchi (2007) suggested that peer scaffolding, usually in learners' L1, may harm their ability development in target language; Laborda and Heyderman (2006) also indicated that too much scaffolding from teachers might lead to a decrease in learners' engagement in learning activities, particularly among young learners.

Bhooth, Azman, and Ismail (2014) explored using L1 as scaffolding to facilitate L2 learning in the classroom in a university in Yemen. Data were gathered from 45 EFL students via various methods, including a questionnaire and semi-structured interviews. Results of the study revealed that using L1 as scaffolding could enhance students' performance in EFL learning, as well as benefit their learning motivation

and confidence. However, excessive reliance on L1 might prevent students from engaging in EFL learning. Students' employment of scaffolding is thus suggested to be cautious. It is examined in this study to discover how Chinese university EFL students use L1 to facilitate learning, instead of impeding it, particularly in an autonomous context.

Scaffolding should be "fadeable": as learners' knowledge and abilities develop, scaffolding is expected to back off and allow more space for learner autonomy during the learning process (Jackson, Krajcik, & Soloway, 1998). It is "assumed to be temporary", and should be withdrawn over time (Stone, 1998, p. 349). Existing studies have advocated the appropriate fading of scaffolding in language learning for the enhancement of learner autonomy and independence (e.g., Belland, 2017; Bybee, 2015; Demetriadis, et al., 2008; Guzdial, 1994; Salehpour & Saeidi, 2016; Wu & Wu, 2014; Zheng, 2016).

Furthermore, not all scaffolding benefits all students, or necessarily improves their learning performance or outcomes (Choi, Land & Turgeon, 2005). For some students, who currently have comparatively lower levels of language abilities and knowledge, scaffolded may be overloading (Ricketts et al., 2000). Students may find that some scaffolding increases their learning burden, instead of easing it, leading to unproductive learning outcomes, as well as discouraging learning experience (e.g.,

Anderson & Armbruster, 1990; Dalton, 2012; Davis & Miyake, 2004; Larssen & Drew, 2015; Oriol, Tumulty, & Snyder, 2010; Talley, 2014). Thus, scaffolding should be “a delicate balancing act” in learning and teaching (Dabbagh, 2003, p. 40).

A study conducted by Larssen and Drew (2015) in Norway explored the use of scaffolding to enhance young EFL students’ performance in learning, as well as its influence on foreign language teacher education. Four student teachers of English and their supervisors participated in the study. Video- and audio-recordings and interviews were used as instruments for data collection. The study discovered that scaffolding could improve student teachers’ learning. However, scaffolded might also have the potential to increase learning burden.

It gives rise to a point that EFL students’ awareness of scaffolding and its employment in language learning is in a close relationship with their learning outcomes. Whether Chinese university EFL students can appropriately select and employ scaffolding for their autonomous learning activities in a resource-rich online context remains a question. This is examined in the current study.

The following table summarizes some recent empirical studies on scaffolding in language learning and teaching. These studies focused on the impacts of scaffolding on EFL students’ language learning from various perspectives, including their

learning interest and motivations (Liu, 2018; Niu, Jiang, & Deng, 2018), language skill build-ups (Deleg, 2018; Ginaya, Aryana, & Somawati, 2018; Shirmohammadi & Salehi, 2018), and learning attention (Li & Li, 2018). Studies also noticed the effects and impacts of scaffolding that was provided by both teachers (Hartani & Sulindra, 2018) and peers (Li & Li, 2018), as well as prepared resources (Mudawe, 2018).

Table 2. 5

Summary of other recent studies on scaffolding in EFL learning and teaching

Source	Context	Findings	Comments
Liu, 2018	34 first-year non-English major undergraduate EFL students in a university in China	Scaffolded micro-lectures could improve EFL students' language proficiency, learning interest, and independence.	Technology-supported scaffolding can play a role in improving EFL students' learning performance and outcomes in a Chinese university context.
Mudawe, 2018	6 EFL students writing their dissertations in Saudi Arabia	Online scaffolding tool could promote students' writing and provide constructive feedback, helping them accomplish learning tasks.	Academic EFL learning and teaching can benefit from online scaffolding tools, which are accessible for a wide range of students and teachers.
Niu, Jiang, & Deng, 2018	24 Chinese EFL learners	Low proficiency level language learners sought more scaffolding for promoting their language learning.	EFL students with different language proficiency levels may vary in needs of scaffolding.
Shirmohammadi & Salehi, 2018	130 ESP students in Iran	Scaffolding enhanced ESP students' performance and test results in reading	For autonomous language learners, scaffolding should be important for their language skill

		comprehension.	build-up.
Ginaya, Aryana, & Somawati, 2018	50 third-semester EFL students in an Indonesian university	The use of scaffolding could promote the development of EFL students' speaking ability.	Whether scaffolding is effective for Chinese EFL students' speaking ability needs more investigation.
Li & Li, 2018	13 EFL students from various countries studying ESL academic writing in the U.S.	Peer scaffolding helped shift students' learning attention to a bigger picture, as well as improve classroom management.	Scaffolding from peers enables EFL and ESL students to view a specific issue from different perspectives.
Deleg, 2018	28 EFL students in a high school in Ecuador, whose first language is Spanish	L1 could scaffold EFL students to improve their listening and reading skills. Students usually had positive perceptions of the use of L1 in their EFL learning process.	The use of L1 can contribute to EFL learning, rather than being harmful to language development.
Hartani & Sulindra, 2018	31 EFL students in Indonesia	Teacher's modelling and peer reviews as scaffolding could enhance EFL students' performance in writing.	Scaffolding can function in various forms for improving EFL students' language skills. Its effects on university EFL students in China need more investigation.

The concept of scaffolding is used as one of the theoretical perspectives of the current study. The uses of scaffolding in different forms and types, including teacher- and peer scaffolding, and scaffolded materials, are examined in this study. Their influence on Chinese university EFL students' learning experience and engagement are also focal points of the research. It expands the study on scaffolding to the Chinese university context, and provides some information about scaffolding in relation to EFL students' different learning situations.

2.6 Chapter summary

This chapter outlined the research context and the four theoretical constructs informing this study. This was followed by a detailed review of research literature in terms of five related areas, i.e., CALL, learner autonomy, interactive learning, ZPD, and scaffolding as four theoretical perspectives. The review mapped the scope of the study, and pointed out recent directions and development of EFL learning and teaching research in the process of critically reviewing key empirical studies.

The reviews presented an argument that the employment of technology-supported learning could facilitate EFL students' language ability and intercultural awareness development. The new learning approach, meanwhile, also brought about some challenges to EFL students. Facing these learning obstacles, EFL students adopted some strategies and measures to cope with them, leading to different learning experiences, performance, and outcomes.

However, it also showed that more research needs to be conducted in different learning contexts and cultures to identify the use of online interactive language learning; for example: Chinese university EFL students' perceptions of language learning, as well as their self-awareness, in the new learning context with various types of learning resources in terms of materials, tasks, scaffolding, and evaluation; their selection, organization and employment of these learning resources, and their engagement in learning activities in the new learning context; and these students' measures and strategies they used in the learning to cope with learning obstacles and challenges.

This leads to the identification of the research gaps, and further informs the formation of research focuses of this study; that is, Chinese university EFL students' perceptions of learning EFL on an online interactive learning platform; and students' learning practices in the new context.

The following chapter introduces the theoretical framework of the current study in detail. The framework has been evolved from the literature review of previous research, and incorporated four key concepts of learner autonomy, interactive learning, ZPD and scaffolding in a framework to examine Chinese university EFL students' perceptions of and engagement in learning EFL in an online interactive context.

Chapter 3 Theoretical Framework

In the previous chapter, related research areas of online interactive multimedia-supported EFL learning were scoped by ways of synthesis and discussion. In particular, the chapter systematically reviewed a number of empirical studies, and identified some gaps and relationships with this study. This chapter presents the theoretical framework of the study, which combines a number of constructs from different intellectual traditions.

Recent online multimedia-supported EFL learning research has been frequently “cross-fertilized” (Dörnyei, 2007; Lamb, 2012) and employed varied constructs taken from broad SCT such as the construct of ZPD, social interaction and scaffolding (e.g., Chen & Ching, 2011; Nah, White, & Sussex, 2008; Warschauer & Lee, 2012; Wu, Yen, & Marek, 2011). Findings derived from these studies provided insights into EFL learners’ learning perceptions, experiences, performance, outcomes, and some other learning-related issues arising from this newly emerging learning context (Huang, 2011; Huang & Hung, 2013; Liaw, Huang, & Chen, 2007; Lim & Shen, 2006; Nguyen, 2013; Phadvibulya & Luksaneeyanawin, 2008; Shi, 2010).

This study employs a theoretical framework that incorporates four constructs of learner autonomy, interactive learning, ZPD and scaffolding, to investigate Chinese university EFL learners’ perceptions of and engagement in using an online interactive multimedia-supported learning platform to develop their English knowledge and

abilities. The framework is largely underpinned by SCT (Vygotsky, 1978), which focuses on the mediated nature of language learning, arguing that language knowledge is derived and constructed by learners via mediations in a sociocultural context (Lantolf & Thorne, 2006; Vygotsky, 1978). The theoretical framework is shown in Figure 3.1:

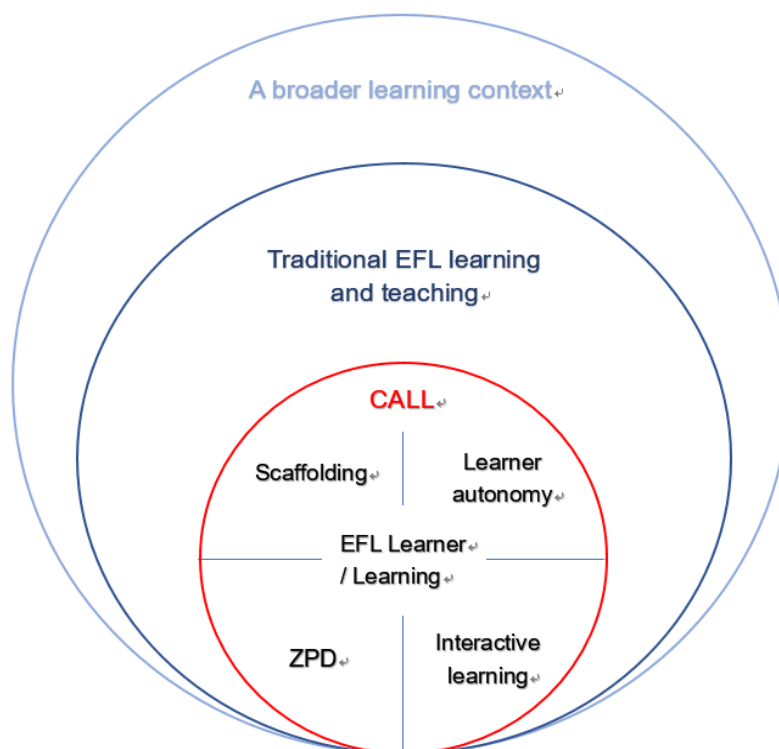


Figure 3. 1. The theoretical framework

3.1 Computer-Assisted Language Learning

CALL helps language learners achieve their learning goals and is treated as a strong tool for foreign language learning, particularly from a sociocultural perspective (e.g., Chapelle, 2009; Haryati, 2018; Levy & Stockwell, 2013). For its potentiality for promoting language ability development and skill build-up, CALL is adopted as a

broad learning context in the current study. It incorporates a wide range of learning resources for language learners to develop their language abilities and knowledge (Fotos & Browne, 2013; Nim Park & Son, 2009; Titova, 2017). CALL is used to provide a learning environment for Chinese university EFL learners, and serves as the context to umbrella theoretical constructs of this study.

3.1.1 The development of CALL

The development of ICTs has reshaped the notion of CALL, and are still developing in the field of language education all over the world in recent times (Gündüz, 2005; Khalitova, Amurskaya, & Gimaletdinova, 2017). Computers, as well as other digital devices, such as iPads and intelligent mobile phones, are transferring their role in CALL from information displaying to knowledge sharing and interaction (Barjis, Samarrai, & Smith, 2009). In modern times, CALL no longer limits itself as a tool to present “textbooks on the screen” (Andeweg & Kunst, 1993), but also support language learners’ various needs, including simultaneous peer–peer and teacher–student communication (Kulavuz-Onal, 2018; Liang et al., 2005; Shang, 2007), human-computer interaction (Mellati, Khademi, & Abolhassani, 2018; O’Rourke, 2008; Yang, 2018), personalized learning (Abdelmageed & El-Naggar, 2018; Amaral & Meurers, 2011; Chen & Li, 2010), and multimedia-enhanced learning (Ramak & Ziabari, 2017; Silverman & Hines, 2009).

The notion of CALL provides a context for a theoretical lens to look into EFL students' language learning with various resources; by employing them, these students are expected to develop their abilities and knowledge for the fulfilment of their individualized learning needs. It is thus adopted in this study to inform the investigation of participants' perceptions of and engagement in online language learning activities.

Regarding the incorporated learning materials and methods, the notion of CALL has experienced three stages of development and evolution: behaviouristic CALL, communicative CALL and integrative CALL (Warschauer & Healey, 1998). Integrative CALL is the mainstream of the current stage of CALL and the focus of this study. It is underpinned by sociocultural and socio-cognitive theories. It focuses on social and learner-centred learning methods and materials (Hirata, 2018). CALL is used to guide the examination of EFL learners' engagement in cognitive and intellectual development within a sociocultural context in this study.

The introduction of integrative CALL into EFL learning provides a habituated environment for the employment of multimedia learning resources (Hegelheimer & Tower, 2004; Warschauer & Healey, 1998), as well as the convenient access to interaction (Benson, 2001; Idrees, 2017; Moladoust, 2018). Authentic materials and multimedia forms of learning resources are used as one of the features of integrative CALL (Alhababi, 2017; Finley, 2017), which are also investigated in the thesis.

3.1.2 Resources in CALL

In an integrative CALL context, three categories of learning resources are incorporated for language learners to facilitate their language practice and development: tutorial resources, authentic resources, and communicative resources (Garrett, 2009). They make a contribution to learners' language learning in different ways.

Tutorial resources benefit learners' language development by providing instructions with their learning of grammar, pronunciation, comprehension, writing practices, as well as inter-cultural contents (Hubbard & Siskin, 2004). Being incorporated in an integrative CALL context, EFL students can use the digital tutorial resources in a more convenient way. It leverages learning resources and optimizes learning outcomes (Shen et al., 2015).

Authentic resources refer to resources that are created by and used for native speakers, in contrast to those created for pedagogical purposes for speakers of other languages (Garrett, 2009). In an integrative CALL context, authentic materials are of more forms, coming from wider sources (Ustunbas & Ortactepe, 2016; Fadda & Qasim, 2013). Multimedia forms, particularly audio-visual ones, work as a good carrier of authentic materials in an integrative CALL context to serve learners' language development (Aldera, 2015; Kawamura, 2017). CALL helps to create an

engaging learning environment to present authentic materials, and to make the learning process interesting (Yuan & Shen, 2014).

The integrative CALL context helps learners ignore time and distance limits, as well as other barriers to actual engagement in interaction and communication in learning (Chun, Kern, & Smith, 2016; Levy & Stockwell, 2013; Warschauer, 1997). Computer-mediated communication is viewed as “the most revolutionary development” in CALL (Warschauer, 1996, p. 31). CALL no longer serves merely as content delivery from teachers to learners, but allows language learners to communicate, collaborate, and interact with peer learners, as well as their teachers, simultaneously and asynchronously (Kukulska-Hulme & Shield, 2008).

The current study adopts the concept of CALL to examine participants’ online EFL learning with various resources. This study focuses on the impacts of different categories of resources on students’ perceptions of and engagement in learning activities in an online context. How these students make use of different learning resources is also investigated by being informed by the notion of integrative CALL.

In China, CALL was introduced into EFL instruction as an innovative approach in the late 1990s (Jiang, Renandya, & Zhang, 2017). It is still at its early developing stage that requires empirical research to evidence the application of CALL in EFL learning and teaching in the Chinese context. This study examines the application of

CALL in China by examining Chinese university EFL learners' learning with various digital resources, providing empirical data for the development of CALL in an autonomous context.

3.2 Learner autonomy

Learner autonomy indicates that a learner makes decisions on all his or her own learning-related issues, including learning aims, materials, strategies, methods and some more complex cognitive process like planning, monitoring, and evaluating (Garrison & Archer, 2000; Holec, 1981; Little, 2001; Littlewood, 1996). The basis of learner autonomy lies in the awareness that the learner takes the responsibility of learning (Little, 1995). A learner with autonomy is supposed to be self-initiative and be self-regulative in his or her learning practice (Ryan, 2000).

With learner autonomy, learning practice involves “learner’s control over aspects of their learning or, more broadly, learning that takes place outside the context of formal instruction” (Benson, 2013, p. 840). Underpinned by SCT (Vygotsky, 1978; 1986), learners with autonomy are expected to construct their knowledge in accordance with needs and interest through seeking information in a broader context rather than within the classroom learning and teaching (Alrabai, 2017; Hellman, 2018).

3.2.1 Learner autonomy in CALL

CALL provides a space for the development of learner autonomy, and support autonomy to contribute to the development of language abilities and knowledge (Dang, 2010). In a technology-supported learning context, learner autonomy can facilitate learners to better complete learning activities (Whyte & Alexander, 2014). It provides learners with adequate options of learning resources without over-intervention (Alnujaidi, 2016; Collante, 2017; Hamamorad, 2016). Multimedia technology could be used to train autonomous learners in a CALL context, and positive results have been achieved (Alibakhshi & Mohammadi, 2016; Liu & Bu, 2016; Mayora, 2006). It should also be merged into language learning classrooms to allow the development of learner autonomy (Mohammadi & Ramezani, 2017; Zhong & Shen, 2002).

Existing empirical studies have confirmed the effects of learner autonomy on the promotion of language awareness and linguistic knowledge for language learners, particularly in a CALL context (e.g., Balcikanli, 2010; Cheng & Dörnyei, 2007; Dang, 2010; Lengkanawati, 2016; Wang & Wang, 2016). Learner autonomy is employed in this study to work as a theoretical construct. It guides the study to investigate Chinese university EFL learners' language learning in an online CALL context, which is outside the classroom, and different from learners' formal language learning and teaching under the control of teachers regarding materials, strategies, and methods.

3.2.2 Autonomous learners

Developed from previous studies (Dickinson, 1987; Holec, 1981;1989), the study proposes that an autonomous learner is expected to practice following key exercise in learning activities by himself: selecting learning materials; deciding learning goals; planning learning activities; monitoring learning progress; and evaluating learning performance and outcomes. In addition, time management, knowledge on learning activities, self-motivation and self-discipline, and self-awareness, are also needed by an autonomous language learner (Ellis & Sinclair, 1989; Ho & Crookall, 1995), which are investigated as a part of language learning in a CALL context in the thesis.

Learners with autonomy in their learning activities can be categorized as higher degree learners and lower degree ones (Littlewood, 1999). Higher degree learners take full responsibility for learning activities, while lower degree learners follow directions to autonomously access and organize their resources to reach their learning goals (Littlewood, 1999). Both types of learners benefit from autonomy in their learning activities.

A learner with the higher degree of autonomy is often independent and self-directed in autonomous learning, making a shift of the role from a passive receiver to an active seeker or a knowledge contributor, and engaging in the whole learning process (Alzeebaree & Yavuz, 2016; Nga, 2014; Betts, 2004). An autonomous learner is supposed to actively seek learning opportunities, instead of waiting for teacher assignments passively (Nosratinia & Zaker, 2014). Being an active

knowledge constructor, an autonomous learner is more likely to pursue constant language development, and becomes a lifelong language learner (Masoumzadeh & Ardebil, 2016; Murphy, 2007; Wang & Wang, 2016).

A learner may exhibit three stages of autonomy in learning with development in regard to his or her learning decisions and practices (Little, 1996): autonomy as a communicator, which refers to using a specific language to fulfil communicative purposes; autonomy as a learner, which refers to engaging in autonomous language learning activities; and autonomy as a person, which refers to autonomy to generate their personal learning ecologies (Lai, 2017). The three-stage model of learner autonomy has the involvement of language acquisition, learning approach and personal development (Benson, 2007), indicating the multidimension nature of learner autonomy (Lai, 2017).

Learner autonomy works as an analytical tool, which is adopted in this study, for the investigation of Chinese university EFL students' language learning in a CALL context. It helps the study to find out the development and exercise of autonomy among this group of EFL students. The theory is also used to specify factors that may encourage or discourage the autonomy of EFL students, as well as its impact on language development.

To become autonomous in language learning, a learner is supposed to learn and use the target language autonomously (Little, 1995); that is, to learn a language autonomously with less teacher control or supervision, which is in line with Wenden's definition of pedagogical autonomy (1997), and to engage in interactive and communicative activities (Tayjasanant & Suraratdecha, 2016). The integration of the two dimensions for language learner autonomy is considered as "the single most impressive achievement" of autonomy promotion (Little, 1995, p. 176). From the two dimensions, the study adopts the notion of learner autonomy to investigate both Chinese university EFL learners' autonomous learning practice, and their communication and interaction. It helps locate the exercise and development of learner autonomy among these learners, and reveals the role autonomy plays in learners' language learning.

Learner autonomy is an end-goal of learning process, instead of a methodology or an approach (Nunan, 1996). A recent study claimed that learner autonomy is not the "ultimate goal" (Benson, 2009) of education, but the means by which learners can work on learning by themselves, or the "capacity to act" (van Lier 2008, p. 163) in learning activities (Little, Dam, & Legenhausen, 2017). This view of learner autonomy indicates the importance of the combination of learner autonomy and learner awareness from diverse areas, including linguistic and language awareness, self-awareness as a language learner, awareness of learning goals and awareness of

learning options, to promote learners' autonomous learning (Little, Dam, & Legenhausen, 2017; Simard, 2004).

A language learner with autonomy often actively creates or constructs an interactive learning environment, and employs his acquired language knowledge and skills to fulfil communicative and interactive tasks (Kuo, 2008). Upon engagement in interaction, learner autonomy elevates, and their language abilities and knowledge develop (Jeong, 2016; Lin, Warschauer, & Blake, 2016). Investigation of Chinese university EFL learners' perceptions of and engagement in interactive learning activities helps discover a picture of learner autonomy among them, which is adopted in the study.

3.2.3 Language input and output

Language input and output form a complete cycle that helps better the language learners to raise their language abilities through practices (Ellis, 2008). Language learning, particularly that occurs in an autonomous context, is advised to integrate a complete input-output cycle (Rott, Williams, & Cameron, 2002; Shirzad & Rasekh, 2017); that is, both reception and production, into L2 learning and practices, which can maximize the language learning effects (Gilabert, Manchón, & Vasylets, 2016; Guariento & Morley, 2001).

However, EFL learners usually have limited willingness to incorporate language output training, such as writing and speaking practices, into their autonomous language learning (Hwang et al., 2014; Jin & Cortazzi, 2006; Yang, 2014). One reason for their dislike is that such learning often takes a long time to arrive at substantial achievements (Wu & Zhang, 2017). Once EFL learners do not see progress of their language abilities and knowledge in a short time, they may be demotivated, and withdraw from learning practice (Falout, 2012; Smith, 2012).

Comprehensible output of target language is as important as language input in foreign language learning (Gholami & Farvardin, 2017; Swain, 1993). In a resourceful CALL context, EFL learners need to foster their language abilities and knowledge through a balanced training on both language input and output (Na, 2012). Both types of learning practice can facilitate language learning, and support learners to develop their language abilities and skills in the long term (Ahn & Lee, 2016).

Examination of EFL students' language learning practice is informed by the construct of the language input and output cycle (Shirzad & Rasekh, 2017). In an autonomous learning context, this study closely investigates what factors encourage or discourage Chinese university EFL students' work on language input and output training. This can guide the study to use the concept as a point of departure to examine students' autonomous language learning, particularly in a new online context, which may be different from the traditional one.

3.2.4 The development of learner autonomy

It is of importance to investigate language learners' development of autonomy, providing an instructive picture for researchers, teachers, and learner themselves to guide the language learning (Wehmeyer & Shogren, 2016). Developed from previous indications (Lee, 1998; Little & Dam, 1998), three aspects of principles are addressed in this study to investigate the development of learner autonomy: learner's involvement in learning, engagement in interactive learning, and learning in a broader context.

Learner's exercise and development of autonomy in learning should be built on the base of volunteer involvement (Kim, 2016). Voluntariness is considered as a pre-requisite of autonomous learning (Beauchamp & Childress, 2013; Fjordside & Morville, 2012). Learner autonomy rises as the level of self-determination of learning-related issues in the process increases (Wang et al., 2016). In an autonomous learning context, engaging in learning or not should lie in the hands of individual learners, rather than being controlled by teachers (Ardi, 2017; Hubbard, 2017).

To enable autonomous learners to take control of learning, and to progress at their own pace, a flexible learning context is necessary (Ghafournia & Sabet, 2014; Mesh, 2010). Learners should be placed at the central position, and take control of the whole learning process, for having more rooms to learn in an autonomous way (Oder &

Eisenschmidt, 2018). Learners should be allowed to change their learning in accordance with the promotion of their language levels, and with the change of their learning aims (Dogan, 2015; Hanifehzadeh & Ebrahimi, 2014).

It informs the study to investigate learner autonomy through focusing on learners themselves and their involvement in learning activities by using various learning materials. Examination of the flexibility of the learning context is needed to reveal whether Chinese university EFL learners have the opportunity to make decisions on their learning, and to develop autonomy.

Interaction and communication with teachers and peer learners often imposes influence on the adoption, exercise and development of learner autonomy in language learning (Kelly, 1996; Pianta, 2017), since autonomous learning “does not take place in a vacuum” (Pemberton 1996, p. 6), but in a sociocultural-shaped environment (Miller, 2009; Smith & Ushioda, 2009). In terms of the exercise and development of autonomy, interaction and independent work are of equal importance (Dam, 1995).

Autonomous learning may have strong collaborative and interactive elements (Little, 1995). Communication, interaction, collaboration, negotiation, etc. are some of the factors with importance in promoting learner autonomy (Bhattacharya & Chauhan, 2010). Compared with independent work, autonomy may benefit more from learners’ interaction and communication in a sociocultural context (Ardi, 2017;

Hafner & Miller, 2011; Lee, 2016). In an interaction-supported learning context, learners construct their language knowledge through interaction and reflection (Sinclair, 2009). Learners are also expected to reach “the highest level” of learner autonomy through dialogic negotiation and interaction in language learning activities (Dang, 2010: p. 4).

In language learning, an interactive environment, with the support of modern ICTs, is crucial for learners to elevate their autonomy, and to encourage them to engage in autonomous learning activities (Benson, 2006; Tayjasant & Suraratdecha, 2016). In this interactive context, learners are expected to be increasingly responsible for their engagement in interaction, and to take more responsibility for issues in interactive learning (Cakici, 2017; Valizadeh, 2016). Language learners, while learning in an interactive context, are supposed to be more independent from relying on teachers and peers, and to gain more autonomy in the process (Oxford, 2003).

Learner autonomy should not be limited within selected educational or cultural contexts, nor only for highly committed learners (Cotterall, 2000). It is expanded into life, as a goal for all kinds of learning that happen in various contexts (Littlewood, 1999). For autonomous learners, learning is not only interaction with teachers and peers in the classrooms, but also autonomous interaction with the world (Thanasoulas, 2000). This suggests the investigation of Chinese university EFL learners’ learner

autonomy should focus on their interaction and communication, as well as the learning contexts in which the interaction and communication occur.

The three principles of learner autonomy development are of value to conceptualize the investigation of EFL students' development and exercise of autonomy in language learning. They provide a theoretical lens to analyse EFL students' autonomy through examination of their learning activities. The principles are thus adopted as a guide for the study on Chinese university EFL students' autonomous learning in an online context.

The cultural features of a society can also have impacts on the development and exercise of learner autonomy in language learning (Oxford & Amerstorfer, 2018; Palfreyman, 2018). The culture of individualism and collectivism suggest different social value systems, sourcing from teachers, peer learners, and the society in developing learner autonomy. The definitions of the two distinctive value systems made by Kim et al. (1994) and Triandis (1995) (cited in Littlewood, 2001: pp. 4-5) are:

Collectivism refers to a value system in which a person's identity, attitudes and actions are determined to a large degree by the groups to which he or she belongs; while individualism is the converse of collectivism. An individual person can

claim rights to self-fulfilment and freedom of choice, even if these sometimes conflict with the interest of the ingroups to which he or she belongs.

In a more collectivist society, such as China and some other East Asian countries (Chen, Nassaji, & Liu, 2016), teachers, who usually act the role of “authority”, enjoy a higher status (Chiu, 2017; Han & Yin, 2016; Li, 2016). The decisions, made by teachers or by the group, in the name of the interest of the collective, often outweigh those of an individual learner (Triandis, 1995). Thus, in such a society, teachers and peer learners often impose external impacts on learner autonomy in learning activities. Individual learners, on the contrary, may change their learning routine, and exercise autonomy in a different way from individual learning to cater for the interest of the collective (Liang & Chen, 2011; Tran, 2007). It may be of greater importance to investigate the impacts in a Chinese context, whose specific value system of the society may magnify the influence, and lead to different outcomes of learners’ exercise of autonomy in language learning (Liang & Chen, 2011).

This informs the integration of sociocultural theories and learner autonomy to examine EFL learning, which is adopted in the current study. Investigating the exercise and development of learner autonomy in a broader sociocultural context is expected to enable teachers, learners, and researchers to be freed from an educational setting, and to gain a deeper understanding of autonomy in a broader environment.

The construct of learner autonomy is used to guide the investigation of Chinese university EFL learners' language learning in an online context. It informs this study to examine these learners' exercise and development of autonomy in their language learning in a CALL context under the influence of various factors, including learners' involvement in learning, interaction and communication with others in a learning context, and broader sociocultural factors. Through incorporating the concept of learner autonomy, the study also investigates learners' learning and its outcomes in an autonomous context.

3.3 Interactive learning

As Little (2003) has suggested, interaction is a key factor related to the generation of autonomy. Interaction is defined as “the social behaviour that occurs when one person communicates with another” (Ellis, 1999, p. 1). Interactive learning focuses on interaction between peer learners and with the teachers in the learning process (Gros, 2001). It involves more than one learner in the learning process and, at the same time, interactive learning provides them with learning and practice opportunities (Fahrutdinova, Yarmakeev, & Fakhrutdinov, 2014).

The construct of interactive learning originated from Vygotsky's SCT (Vygotsky 1978), which is viewed as one of the major theoretical frameworks in a language learning context for ability development and linguistic awareness promotion (Shen & Suwanthep, 2011). The construct lies on the basis of SCT, arguing that learners

intentionally construct their knowledge through interaction with the sociocultural contexts and corresponding reflections (Duffy & Jonassen, 2013). Interaction in learning “is expected to promote negotiation of meaning, and if it does so, this should be beneficial for language acquisition” (Chapelle, 2003, p. 56). It is considered as a significant factor contributing to language acquisition (Luk & Lin, 2017).

In interactive learning, learners are encouraged to interact via various means, including face-to-face and distance interaction, for promotion of each participant’s development by sharing information and resources, and helping, supporting, and encouraging peers (Challob, Bakar, & Latif, 2016; Rodliyah, 2016). It allows learners to develop their language abilities by engaging in complex language inputs and outputs to and from peers and teachers (Ahn & Lee, 2016; İnceçay & Koçoğlu, 2017). Interaction provides them with opportunities to be exposed to target language uses that are more cognitively complex, which leads to higher level of cognitive development, as well as language development (Al-Abdali, 2016; Rahman, 2015).

This construct of interactive learning conceptualizes the language learning in a sociocultural context, where learners are expected to construct their linguistic knowledge and ability through interaction with the environment via mediations. It is adopted in this study as a key to investigate and understand EFL students’ language learning through interaction with teachers and peers in an online context.

3.3.1 Interactive EFL learning

Meaningful interactive learning always occurs in a learner's ZPD, with the involvement of teachers, experts or peers (De Guerrero & Villamil, 2000; Lantolf, 2000; Ohta, 2000). Meaningful interactive learning that essentially promotes learners' language development occurs through effective response, internal and external negotiation, arguing against points, adding to evolving ideas, and offering alternative perspectives with one another while solving some real tasks (Rostami, Kashanian, & Gholami, 2016; Woo & Reeves, 2007). Interaction contributes to a learner's cognitive and intellectual development, leading to improvement in their language abilities and knowledge (Hawkins, 2018; Saeed, Khaksari, & Eng, 2016).

In ZPD, interaction can enhance the development of language capacity through two linguistic evidences: the positive and the negative (Long, 1996; Vygotsky, 1978). Positive linguistic evidence is the help learners provide for peers in interactive learning activities, while negative evidence is the assistance learners receive from peers that helps them improve their language abilities through rephrasing and correcting language outputs (Swain, 1985). Being scaffolded by teachers and peers in interactive learning, learners can internalize language knowledge and abilities (Al-Abdal, 2016; Vygotsky, 1978), and achieve better goals with interaction than learning alone (Nguyen, 2013). Interaction is an effective means for language learners to learn knowledge, and to practice their language skills (Hwang et al., 2016; Goodman, 1990).

The notion of meaningful interactive learning provides a theoretical proposition to bridge the interaction with the concept of ZPD. It can guide the examination of participants' learning in their individual ZPD, and their perceptions of this approach for language development, particularly in an autonomous interactive learning context.

3.3.2 Autonomous interactive learning

Interactive language learning promotes learner autonomy by encouraging learners to actively engage in target language learning activities (Brown, 2001; Long & Porter, 1985). Learner autonomy is elevated during interactive learning, as learners need to deal with learning issues when participating in interactive activities (Sinclair, 2009). Learner autonomy also shapes learners' interaction with peers in the learning process, which includes a wide range of learning-related issues, such as identities, resources, and practices (Toohey, 2007). Thus, learner autonomy is internally generated after one's "multi-directional negotiations with his or her community" (Dang, 2010: p. 4). As Lee (2011: p. 89) concluded, "self-directness, critical reflection and cognitive engagement", which are based on interactive learning, are crucial to the promotion of learner autonomy. Interactive learning is characterized by a high degree of learner autonomy (Schwienhorst, 2002).

In an autonomous learning context, learners promote their language development in different ways, among which L1 mediation and imitation are two key strategies. L1 mediation commonly occurs among EFL learners' interaction. Abuse of L1 in interactive foreign language learning can impede the development of target language, and reduce the effectiveness and efficiency of learning (Guk & Kellogg, 2007; Storch & Aldosari, 2010; Watcharapunyawong & Usaha, 2013), while appropriate incorporation of L1 into interaction can be beneficial (Wu, 2016).

L1 can act as a cognitive tool in the foreign language knowledge construction process, rather than disrupting language learning (Lee, 2016; Swain & Lapkin, 2000). L1 can be a mediator, like L2, in a social interaction, through which learners intentionally promote their language development (Berning, 2016; Lantolf & Thorne, 2006). In foreign language learning, appropriate use of L1 can promote interaction and facilitate learning, as well as enhance EFL learners' learning experience (Sah, 2017).

In interactive EFL learning, imitation is widely used as a common learning strategy by both teachers and learners to promote learning. As Vygotsky (1978) pointed out, imitation is a key aspect of language learning. It is a complex and transformative activity that helps language learners internalize linguistic knowledge (Lantolf, 2000; 2006; Vygotsky, 1978). Imitation is advised to be incorporated at the beginning stage of interactive learning, from which learners can start to construct their

own learning (Lantolf, 2005; Strandberg, 2006). Learners are expected to employ imitation as a strategy to develop their own individual learning, instead of simply copying others' (Lantolf, 2000; 2006).

Regarding imitation, modelling should be provided as a key part of interactive language learning, particularly at the early stage of learning in a new context (Lantolf, 2015). Both teacher and peer modelling can help learners gain control of their learning with new contents, and enhance their performance (Alrajhi & Aldhafri, 2015; Chang, 2015). Modelling not only improves learners' language skills and knowledge, but also develops their metacognitive awareness (Berggren, 2013).

Interactive learning can be a useful theoretical construct for finding out EFL students' learning relating to the use of L1 mediation and imitation as learning strategies in an autonomous context. This is adopted as a point of departure in the current study to examine Chinese university EFL students' autonomous interactive learning, as well as their selection and employment of learning strategies to cope with digital learning resources that are used in a CALL context.

3.3.3 Interactive learning in CALL

Interactive language learning in a CALL context is considered as key to the increase of learning effectiveness and efficiency (Sachs, Candlin, & Rose, 2003). The blending of ICTs and language pedagogical development creates a context to provide

conditions for interactive language learning (Chen, 2011), which further triggers “shared understanding” and “alternative solutions and hypothesis building” (O’Malley, 1995, p. 289). Technologies also allow learners more control for more interaction and cognitive engagement in language learning (Jeong, 2004; Lee, 2005). CALL is believed as an effective tool to promote interactive language learning both in and out of the classroom (Shi, 2006). CALL also benefits language learning by producing “real interaction” with authentic materials and target language speakers (Rammal, 2005).

CALL serves as a catalyst for language learners’ knowledge construction and understanding through interaction (Benson, 2001; Zhu, 2017). It benefits language learners by providing a low-stress environment that encourages their risk-taking (Salehi, 2017; Warner, 2004). CALL offers a resource-rich environment and an encouraging context for interactive language learning with peers as well (IIter, 2009; Stepp-Granny, 2000). Technology-supported interactive learning is also described as interesting and enjoyable, and has learners’ acceptance (Peterson, 2006; 2012). To understand participants’ perception of and engagement in interactive learning in an online CALL context, this study adopts the overlapping domain of technology-supported interactive learning as an analytical tool.

3.3.4 Familiarity in interactive learning

When facing new interactive EFL learning in a technology-supported context, familiarity with learning contents can help learners engage in learning by helping EFL learners gain more confidence about their learning, and enhances their performance in learning activities (Dawadi, 2018; Qiu & Lo, 2017). It improves learners' motivation and willingness to engage in interactive learning activities (Li & Zhu, 2013). In an inter-cultural learning context, such as in EFL learning, familiarity with learning contents plays a contributing role (Ho, 2009; Larzén-Östermark, 2008).

Familiarity with learning procedures is of importance to learners' interactive learning, particularly for learning in a new CALL context. It is advised for interactive English learning to familiarize learners with the learning procedures at the beginning stage (McDonough & Sunitham, 2009). It is an effective way to enhance learners' confidence to engage in learning, and to enable them to behave appropriately in their learning process (Wang, 2014).

Otherwise, unfamiliarity with the topics of learning materials or learning procedures possibly results in a withdrawal from interactive EFL learning (Rafie, 2013). Some learners may evade learning and keep silent in the whole process due to a lack of necessary information on their learning (Wilang, 2017). Unfamiliarity with learning contents or learning procedures may demotivate them and prevent them from continuing learning (Duong & Seepho, 2017; Ebata, 2009; Li & Zhou, 2013). It is also a factor that leads to ineffective English language development (Chen, 2006).

In interactive learning, familiarity is not always beneficial to language development. Familiarity with learning contents cannot always arouse EFL learners' learning interest (Bahous, Bacha, & Nabhani, 2011; Sttot, 2004), nor can it necessarily help learners achieve their learning goals by providing challenging but safe learning contents (Cheng & Dornyei, 2007). Meaningful interactive language learning is built upon the base of learners' evolving ideas from different perspectives (Lapadat, 2002; Lave & Wenger, 1991). Being immersed in a familiar context with familiar contents can hardly present learners with interactive activities in this way (van Lier, 2004). It may not be beneficial to learners' language development, which is also investigated in the current study.

The current study adopts familiarity as a perspective on interactive learning for the investigation of participants' EFL learning. However, whether familiarity of learning contents and procedures can facilitate interactive learning and improve students' learning experience remains a question. This study focuses on students' interaction with this perspective, as well as their perceptions of familiarity in the interactive learning process.

The construct of interactive learning is incorporated in this study to investigate Chinese university EFL learners' language learning practice in an online context. It informs the study to compare EFL learners' different perceptions of and engagement

in interactive learning in a CALL context, and that occurs in a traditional environment, through which the study gains a better understanding of interactive EFL learning.

Factors that may encourage or discourage learners to engage in interactive learning are also investigated, providing more information on the learning methods.

3.4 Zone of Proximal Development

The concept of ZPD refers to “the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86). Initially working in the field of children’s education, ZPD was expanded beyond its boundary to L2 and FL education that demonstrated its constructive and instructive functions (Lantolf & Poehner, 2008; Obeiah & Bataineh, 2016). Three main assumptions are highlighted to specify the construct of ZPD in detail regarding learning (Chaiklin, 2003): the generality, the assistance, and the potential.

The generality assumption proposes that a learner can accomplish a task that lies in his ZPD with appropriate assistance (Nicholas, 2016). Learning occurs in “any domain of skill” (Tharp & Gallimore, 1998, p. 96), including foreign language learning and language skill build-ups. The generality assumption informs this study to investigate learning by focusing on a learner’s endeavour in learning activities, as well as the scaffolding he or she employs to overcome obstacles in the process.

The assistance assumption focuses on assistance provided by an expert or a knowledgeable peer to a novice learner in the learning process (Ewert, 2009). This assumption is raised to cover the learning obstacles a learner may encounter in their learning, and the strategies they use to cope with it. It also involves the interaction between participants of learning activities in a sociocultural context.

The potential assumption draws attention to the learner. A learner learns and acquires new knowledge if it lies within his or her ZPD. Learner potentiality of learning is “strongest” within ZPD (Fabes & Martin, 2001, p. 42). It leads to the assumption that it can greatly facilitate, accelerate, and motivate learning if a learner’s ZPD can be identified and employed to guide his study (Chaiklin, 2003).

These three assumptions of ZPD can be a theoretical construct for the analysis of EFL students’ development and adoption of ZPDs as an instructive tool in their language learning. They are employed in this study for the investigation of EFL students’ language learning regarding the concept of ZPD.

3.4.1 Individual ZPD and language learning

Individual ZPD is where his or her language learning and acquisition takes place (Freeman & Freeman, 2011). For promoting effective EFL learning, and enabling learners to enjoy essential improvement in their language abilities, learning resources that lie within EFL learners’ individual ZPD are advised to be provided in language

learning. Within individual ZPD, learning can have appropriate challenges for EFL learners' learning, leading to positive learning outcomes (Aseri, 2017; Kao, 2010; Yang, 2006). Otherwise, EFL learning that is beyond EFL learners' ZPD may result in demotivation of learners, as well as unproductive learning outcomes (Han, 2007).

Actual language learning always occurs in learners' individual ZPD (Woo & Reeves, 2006), where learners can accomplish learning with necessary support, and acquire improvement of their language knowledge and ability (Tharp & Gallimore, 1998). Framing language learning into ZPD can accelerate it, and lead to positive outcomes (Chaiklin, 2003). Learning occurs through the "process of inter-subjectivity in the enculturized ZPD" (Woo & Reeves, 2006: p. 19). Investigation of learning is supposed to focus on both learners' individual and interactive learning within the ZPD, with the influence from a broader sociocultural context (Afraz, 2016; Hawkins, 2018; Jonassen, 1999). This construct of ZPD provides a theoretical lens for the study to investigate Chinese university EFL learners' learning resources and contexts, which indicate the range where their learning occurs.

The construct of ZPD, which focuses on learners' internal knowledge and skills, sheds light on the relationship between the improvement of language capacity and external assistive factors (Vygotsky, 1986). External assistive factors that come from concrete learning activities, multi-form learning materials, and experts and knowledgeable peers, are considered within the framework of ZPD (Lantolf, 2000).

They work as the foundation in cognitive development and language knowledge internalization within the ZPD (De Guerrero & Villamil, 2000). Being scaffolded, learners can move from a lower level to a higher one in their learning (Khaliliaqdam, 2014). It also leads to the mutual understanding; that is, the enhancement of inter-subjectivity among participants (Edwards, 2005).

Three ways of regulation are imposed on learning: object-regulation that is controlled by things and activities in learning, other-regulation that is host by teachers and parents, and self-regulation through self-directed learning (Foley, 2016). It is argued that learning should move from object-regulation to other-regulation, and finally to self-regulation (Vygotsky, 1978).

From learners' perspective, autonomy is bonded with the notion of ZPD. A learner and an expert are expected to achieve "inter-subjectivity" in learning within the ZPD, whereby the learner continuously relies on the expert to redefine his learning situations (Khosravi, 2017; Wertsch, 1984). Learners are expected to be "autonomous objects comprised of bundles of variables" in learning within the ZPD, instead of passive receivers of information and knowledge from teachers (Dunn & Lantolf, 2002, p. 428). The achievement of self-regulation is one of the objectives of learning development within ZPD (Cross, 2003).

3.4.2 ZPD in CALL

The integration of modern ICTs and multimedia into language learning makes it workable for learners to locate their individual ZPD, and to frame their learning in it (Barrett, 2008; Hussin, 2011; Yu, 2004). Learning in ZPD is effective as it provides learners with suitable learning contents in accordance with their current language levels (Chan & Liou, 2005; Huang, Chern, & Lin, 2009).

Online EFL learning sets out an appropriate zone for potential learning promotion by providing abundant resources, from which learners can choose and organize learning according to their individual ZPD (Moradian, 2015; Tajeddin & Tayebipour, 2015). Within the range, learners are motivated to promote learning and to solve problems strategically (Lantolf & Appel, 1994).

CALL provides a convenient context for collaborations, by which participant learners could empower each other to achieve what they could not do individually; or seek necessary assistance from a knowledgeable peer to achieve language development (Gutiérrez, 2006; Saeed & Ghazali, 2016). The integration of the construct of ZPD into a CALL and online EFL learning context guides the study to investigate EFL learning, particularly autonomous learning and interactive learning, in a new technology-supported environment. It enables the study to obtain information on EFL education and the innovation to traditional learning and teaching in a modern university context.

Regarding learning resources that lie in the ZPD, corresponding appropriate learning strategy should be employed. Learning strategy is not inherently good or bad, but should be built depending on the learning contexts and corresponding resources (Cohen, 2003; 2007; Grabe, 2004). Meanwhile, learners' selection and deployment of a certain learning strategy are always built on the base of their metacognitive awareness (Carrell et al., 1998; Cohen, 2007; Zhang, 2008). An investigation of EFL learners' uses of learning strategies is performed in this study, to discover learners' learning with new types of materials in an innovative context.

3.4.3 Evaluation in ZPD

Evaluation should be incorporated in language learning to simultaneously diagnose and promote learner's language learning on the basis of their individual ZPD (Lantolf & Poehner, 2008). The procedure in language learning is "an intervention", through which learners can know how to perform better in their learning, as well as their future development (Sternberg & Grigorenko, 2002, p. vii).

Evaluation in language learning is expected to diagnose learners' learning in a dynamic way. This is considered as the fundamental link between assessment and ZPD (Minick, 1987). Compared with traditional summative assessment, evaluation in ZPD can provide immediate and precise feedback to enable teachers and learners to gain awareness of their learning process and performance (Garb, 2008).

The goal of applying evaluation is to “measure, intervene, modify and document” the process of language learning (Anton, 2009: p. 579). Evaluation should focus both on a learner’s performance in a task, with appropriate assistance from an expert or a knowledgeable peer, and to what extent this learner can benefit from it (Luria, 1961). Furthermore, it also examines the learner’s learning by looking at the internalization of the knowledge through mediated learning activities (Poehner & Lantolf, 2005). Therefore, evaluation in ZPD benefits learning from these two sociocultural aspects: it combines evaluation and instruction in learning as a complete process, and it draws attention to a learner’s future knowledge construction (Lan & Liu, 2010).

The concept of ZPD is adopted in this study to conceptualize Chinese university EFL students’ evaluation and assessment in language learning. It helps the study find out how these students evaluate their learning in an autonomous context. It also works as the key to understand the factors and resources EFL students need to plan their future learning activities.

The online learning platform to be employed in the current study provides Chinese university EFL learners with a wide range of digital learning resources, so that they can well develop their language knowledge and achieve their learning goals. Also, the platform provides opportunities for peer interaction that contributes to the enhancement of language skills in communication. It incorporates various resources, including instructive materials, interaction, and scaffolded resources for EFL learners’

in-process evaluation, which enable them to grasp a clear picture of their learning performance and outcomes.

ZPD serves the study as one of the guiding constructs. It informs this study to examine Chinese university EFL learners' language learning by investigating their learning range, as well as the learning resources they select and employ in an autonomous online environment. Corresponding learning strategies that EFL learners use for learning in this video-based interactive context are also examined. Being informed by the construct of ZPD, this study examines EFL learners' self-evaluation in an autonomous context as well.

3.5 Scaffolding

Scaffolding is in close conjunction with the construct of ZPD, referring to instructive and supportive behaviours and materials in the learning process provided by an expert or a knowledgeable peer (De Guerrero & Villamil, 2000). It involves the participation of both a novice and an expert, as well as their interaction and communication in a problem-solving task (Ferreira, 2007). From the social dimension, scaffolding is "a mediating strategy" and "a dialogic process" that occurs in a learner's ZPD (Al-Jaafreh, 1992; Ellis, 2004). It is one of the "most recommended, versatile, and powerful instructional techniques" of language learning and teaching in the SCT framework (Clark & Graves, 2004: p. 182).

3.5.1 Scaffolding and language learning

In order to assist learners' language learning, instead of increasing their learning burden, scaffolding is supposed to be framed into their individual ZPD (Sadeghi, Afghari, & Zarei, 2016). Deployment of scaffolding should take learners' acceptance and current language levels into consideration, and provide necessary help with their learning (Ellis, 2004). "A delicate balancing act" of scaffolding and learners' language abilities needs to be achieved (Dabbagh, 2003). Scaffolding provides learners with "safe but challenging" learning within their ZPDs, where their learning motivation and potentiality can be best enhanced (van Lier, 2004: p. 196).

Learners employ scaffolding within their ZPDs to promote learning as scaffolding enables them to overcome their limitations in learning and achieve meaningful learning outcomes (AlThiyabi & Al-Bargi, 2016; Levitt, 2017). Scaffolding enables a learner to complete a task with teachers' support of "cueing, questioning, coaching, corroboration, and plain old information" (Pearson, 1996, p. 273), which is purposely employed to help a learner overcome specific problems in his or her learning process (Ellis, 2004). With this support of scaffolding, a learner is able to do something that "she or he might not have been able to do otherwise" (Ohta, 2000, p. 52). That is, scaffolding is a tool to bridge the gap between what a learner can do and what he or she cannot do independently (Gillies & Boyle, 2005).

Appropriate scaffolding efficiently assists learners to obtain desired learning outcomes within their ZPDs (Abdullah, Hussin, Asra, & Zakaria, 2013). It helps learners achieve a higher level of learning (Siyahhan, Barab, & Downton, 2010; Zevenbergen, 2007). Once learners achieve the targeted level of learning, scaffolding is expected to vary with the changes of learning situations accordingly (van de Pol et al., 2010). Scaffolding should not be in a static condition instead, it is expected to be a dynamic intervention, which is “an intervention finely tuned to the learner’s ongoing progress” (van de Pol, Volman, & Beishuizen, 2010, p. 272).

The notion of scaffolding provides a theoretical proposition of the positive influence of scaffolding on language learning and development. This relationship is adopted in the current study to inform the investigation of EFL students’ language learning with assistance in an online context. It is also the key to understand EFL students’ uses of scaffolding in the learning process, being as a research focus in this study.

3.5.2 Key points of scaffolding

To achieve successful scaffolding in language learning and teaching, some key points are developed from van Lier’s (2004) indication of the features of scaffolding. Scaffolding is supposed to occur repeatedly, allowing learners to have the opportunity to review it, and put it into use for assistance (van Lier, 2004). The contents of scaffolding are expected to be tailored by learners. They are supposed to serve learner

individual needs in language learning, and vary as their learning improves (Chen & Law, 2016). Scaffolding should occur in a “safe but challenging environment”, where errors and mistakes should be accepted as routine in the learning process (Barnard & Campbell, 2005). Scaffolding usually occurs in the form of interaction, which requires inter-subjectivity among learning participants; that is, learners should achieve mutual understanding with their peers and teachers (Belland, 2014).

Scaffolding should always occur in a natural way when it is actually needed (van Lier, 2004). With scaffolding, learners should take increasing responsibility for their learning, instead of being more dependent on assistance (van Lier, 2004). To achieve this, scaffolding is expected to be fadeable; that is, scaffolding should be withdrawn to create more space for learners’ independent learning (Jackson, Krajcik, & Soloway, 1998; Li, 2017). By employing scaffolding, learners gain more independence in the learning (Riazi & Rezaii, 2011; Schumm, 2006). Scaffolding enables learners to develop their capacity for cognitive tasks with less reliance on external mediation (Lantolf & Throne, 2006).

Inappropriate uses of instructive resources may lead to negative impacts, and unproductive learning outcomes (Farahian, 2016). It harms learners’ self-initiative and self-regulative learning practice for language development, preventing them from future independent language development (Apple & Kikuchi, 2007; Holton & Clarke,

2006). Employing scaffolding should be careful, to make full use of its benefits to promote learning activities (Talakoob & Shafiee, 2017).

The concepts of scaffolding and ZPD are usually related to each other. Scaffolding is considered to lie in Vygotsky's ZPD framework (Hammond & Gibbons, 2001), while ZPD is "at the heart of the concept of scaffolding" to act as the theoretical basis (Verenikina, 2003: p. 163). Scaffolding aims at helping learners through the ZPD to extend their abilities and knowledge (Mirahmadi & Alavi, 2016; Tabak, 2004), which is believed to happen in the range of an individual learner's ZPD (Qin & Li, 2016).

The construct of scaffolding provides a theoretical construct for seeing into EFL learning that occurs within students' ZPDs. These key points of successful scaffolding are adopted in this study as an analytical tool for the examination of EFL students' perceptions of scaffolding, and their employment of it in online language learning. This theoretical construct enables the study to gain information on learners' language learning with scaffolding, as well as the resources they use as scaffolding in the process.

3.5.3 Scaffolded resources

Scaffolding helps learners develop abilities and gain increasing autonomy in language learning (Kompa, 2014). Language learners actively seek scaffolding from

varied sources, such as peers and communities (Black, 2008; Bryan & Christianson, 2008), teachers (Davis & Miyake, 2004; Jang, Reeve, & Deci, 2010), and instructive multimedia materials (O'Bryan & Hegelheimer, 2007). Autonomous learning, with the support of accessible scaffolding, gradually shifts the learning responsibilities from teachers to learners (Veerappan, Suan, & Sulaiman, 2011). Scaffolding is crucial to the shift process (Dang, 2010). This study is informed by literatures to look into EFL students' uses of scaffolding in an autonomous learning setting, as well as the promoting influence of scaffolding on the development of autonomy among these students.

Scaffolding often occurs in a social context, and comes from different persons (Donato, 1994; Storch, 2007), which emphasizes the role interaction plays (Rahimi & Tahmasebi, 2010). Interaction is critical in language learning as it means to engage in a social process that is the basis for language knowledge construction and cognition growth (Lipponen, 2002). The notion of scaffolding and learning context suggests seeing EFL learning from a sociocultural perspective, where language knowledge is viewed to be intentionally constructed by learners through social interaction with various mediators (Liu & Lan, 2016).

Besides interaction, instructive materials are another main source for language learners to obtain scaffolding (Mirahmadi & Alavi, 2016). Regarding these materials, two forms of scaffolding are commonly employed in language learning: soft

scaffolding and hard one (Brush & Saye, 2002). The wide sources of scaffolding in language learning provide the current study a conceptualized framework to look into Chinese university EFL students' learning. It emphasises students' selection, organization, and employment of scaffolded resources, and its impacts on students' learning activities.

Soft scaffolding comes from real persons, including knowledgeable teachers and more capable peers (Bruner, 1986; Vygotsky, 1978). It involves the interaction between both an expert and a novice, through which a problem-solving task is accomplished (Ferreira, 2007). In this process, learners' language abilities are promoted. The teacher is one of the major sources of soft scaffolding for learners in language learning, from which learners can access reliable instructions (Davis & Miyake, 2004; Jang, Reeve, & Deci, 2010). Teacher scaffolding can facilitate learners' learning, and provide targeted help with their learning obstacles in various contexts, particularly in Asian countries (Liang & McQueen, 1999). Peer scaffolding is also an effective way for supporting learners' language learning (Donato, 1994; Nguyen, 2013; Peterson, 2012). Sharing and exchanging ideas in interaction is one of the major forms of peer scaffolding, through which learners absorb language knowledge via alternative perspectives while solving some real issues (Chlopek, 2008; Saeed, Ghazali, & Aljaberi, 2018).

The other form is hard scaffolding from materials. Hard scaffolding is “static support that can be anticipated and planned in advance” (Brush & Saye, 2002, p. 2). In language learning, hard scaffolding consists of materials in various forms, including notes, references, extended information, explanations etc., aiming at building learners’ linguistics knowledge and language abilities from different angles (Kao, Lehman, & Cennamo, 1996; Mardijono, 2012). It is expected to develop learners’ abilities and knowledge to a target degree within their ZPD from a lower level gradually (Gillies & Boyle, 2005; Siyahhan, Barab, & Downton, 2010).

Two types of hard scaffolding, explicit scaffolding and tacit, serve language learning in different ways (Hadwin & Winne, 2001). Explicit scaffolding directly instructs learners’ learning by providing straightforward information and materials. It assists learners to target the accomplishment of a learning task and the achievement of their learning goals; while tacit scaffolding is less directive. It promotes learners’ learning without working explicitly on learning activities. Instead, it caters for other aspects of language development, such as cultural awareness and communication skill.

It should be noted that the scaffolding from teachers, experts, and knowledgeable peers in a learner’s ZPD is “graduated, contingent, and dialogic”, from an explicit way to an implicit way (Lantolf & Aljaafreh, 1995, p. 620). It should be only provided when learners actually need it and is withdrawn once “the learner shows

signs of self-control and ability to function independently” (Aljaafreh & Lantolf, 1994, p. 468), or actively rejects help when scaffolding is offered (Wertsch & Hickmann, 1987). The key factor that makes successful and effective scaffolding is the control of a learning task to “keep it whole”, and to “present the learner with just the right challenge” (Clark & Graves, 2004: p. 571).

The concept of scaffolding is employed in the study for guiding the investigation of Chinese university EFL learners’ language learning in a sociocultural context. It informs the study to adopt the concept to investigate participants’ employment of assistance to promote their language learning from various resources, particularly in an autonomous online context. The concept of scaffolding also reminds this study to pay attention to EFL learners’ possible misuse of scaffolded resources, which may be harmful to their language development in the long term.

3.6 Integration

This study employs SCT as an umbrella in a CALL context to investigate Chinese university EFL learners’ language learning. Developed from Lebow (1993), some key principles are raised in the study to form a merge of SCT and modern ICTs to create a framework for online language learning.

It is expected to employ modern ICTs to create a buffer between a learner’s current language level and contents in the ZPD, and provide scaffolding to bridge the

gap zone (Pilar, Jorge, & Cristina, 2013). Learning in this technology-supported context, a learner is supposed to improve his language abilities and knowledge gradually from a lower level to his targeted one with the support of scaffolding (Khaliliaqdam, 2014).

The technology-supported language learning context should encourage both independence and interdependence in the process. It is expected to provide various resources to support individual learners to learn in an autonomous context independently (Finley, 2017). Also, it is supposed to enable learners to have access to interaction and communication in their learning (Fallis, 2018). Learners should foster their inter-subjectivity in language learning, while they also engage in interactive learning actively (Tao et al., 2018).

Language learning is supposed to be framed within learners' ZPD, where learners can work on learning with strong motivation and interest (van Lier, 2004). The technology-supported language learning needs also to continuously motivate learners, and provide varied learning materials with the changes of learners' learning interest accordingly (van Rensburg & Han, 2018).

The responsibilities of making decisions on learning-related issues are gradually transferred from teachers to learners. Language learners are supposed to take increasing responsibilities in their learning in a technology-supported environment

(Warschauer & Healey, 1998). Learners are at the central position of learning, taking control of their autonomous learning, rather than being dependent on teachers (Angelova & Zhao, 2016). Their autonomy is elevated in a CALL context (Beek et al., 2018).

The technology-supported language learning is supposed to cultivate and trigger a learner's willingness to engage in future learning processes. A learner is to be autonomous and independent in language development with the support of modern ICTs, and gradually become lifelong language learner (Donato, 2000). A learner's strategic exploration of errors in the learning process should be also allowed (Almekhlafi, 2006).

Under the umbrella SCT in a CALL context, four strains of constructs, i.e., learner autonomy, interactive learning, ZPD, and scaffolding, are incorporated to form the theoretical framework of the study.

Language learning is considered as “a social and dialogical process of construction” (Duffy & Cunningham, 1996: pp. 181-182). It involves learners' interaction, communication, and collaboration to jointly accomplish a learning task by using a set of mediations, such as language and instructive materials (Pavlenko & Lantolf, 2000). In the process, scaffolding, from peers, teachers, and materials, functions to enable a learner to intentionally construct his or her language knowledge

within individual ZPD (Kenning, 2010). Eventually, a learner is expected to be autonomous and independent in language development, and gradually become a lifelong language learner (Donato, 2000).

The theoretical framework is centred on EFL learners as the study focus. Their perceptions of and engagement in a CALL context for language development are investigated in this study. A CALL context is placed in the inner circle of the framework, which is composed of four constructs: learner autonomy, interactive learning, ZPD, and scaffolding. They form a quadrangle framework to correspond to the study. Investigation of EFL learners' perceptions of and engagement in autonomous online language learning is informed by these four theoretical constructs.

Examination of EFL learners' autonomous learning, as well as the role autonomy plays in their learning, is informed by the concept of learner autonomy (Benson, 2013; Garrison & Archer, 2000; Holec, 1981). It also takes Chinese university EFL learners' development of autonomy into the study.

Study on EFL learners' interaction, as well as their participation and engagement in interactive learning activities via the Internet in a CALL context, was informed by the concept of interactive learning (Lantolf, 2000; Ohta, 2000). The benefits and challenges EFL learners face are investigated to reveal their interactive learning in an

autonomous CALL context as well. It is framed in the concept of interactive learning (Chapelle, 2003; Duffy & Jonassen, 2013).

Investigation of EFL learners' learning with appropriate resources is informed by the concept of ZPD (De Guerrero & Villamil, 2000; Vygotsky, 1978). The theory also informs the examination of the learning strategies EFL learners use for corresponding learning resources (Cohen, 2003; 2007; Grabe, 2004). This group of Chinese university EFL learners' self-evaluation in an autonomous online learning context is considered as well, being framed within the concept of ZPD.

Finally, the concept of scaffolding informs the investigation of EFL learners' selection and employment of various resources, including learning materials, tasks, and real persons, to promote their language learning in an autonomous online context (Clark & Graves, 2004; van Lier, 2004).

A traditional EFL learning and teaching context serves as the outer circle of this theoretical framework. It informs the investigation of EFL learners' language learning in a bigger learning context, where both technology-supported approaches and traditional lecture-based and paper-based approaches are adopted to promote the language development of EFL learners. Examination of the differences in EFL learners' perceptions of and engagement in the two learning contexts, the CALL one and the traditional one, is also performed. The expanding circle lies within a broader

learning context. It informs the study on Chinese university EFL learners' employment of acquired linguistic knowledge, as well as corresponding learning strategies, for more intellectual and cognitive development, rather than being limited within EFL learning. As a whole, this integrated theoretical framework provides a point of reference to guide this study.

3.7 Chapter summary

This chapter presented the theoretical framework adopted in the study. It introduced the CALL background of the case study. Then it clarified four strains of theories employed to construct the framework for the study: learner autonomy, interactive learning, ZPD, and scaffolding. The framework is employed to inform the research designs and data analysis, which are expected to discover answers to two research questions of the current study: 1. Chinese university EFL learners' perceptions of online interactive video-based language learning; 2. Learners' engagement in online EFL learning.

Chapter 4 Research design and methodology

Informed by the theoretical framework described in Chapter 3, this chapter presents the research design and methodology. They inform the data collection and analysis for this case study in a Chinese university EFL context. This chapter outlines the overall design, including the research context and information about participants. Then it gives details of four instruments for data collection, which are: a questionnaire, semi-structured individual interviews, focus groups, and documents, providing empirical evidence of Chinese university EFL students' perceptions of and engagement in an online interactive EFL learning platform for language development. Procedures and processes of sample and data analysis are also presented. Trustworthiness of the research process and ethical issues are considered as well.

4.1 Research design

This is a qualitative case study supported by statistical descriptions. Informed by the broad operational framework proposed by Crotty (1998), the research design of this study involves four progressive levels: epistemology, theoretical framework, methodology and methods. The research design of the present study is illustrated in Figure 4.1:

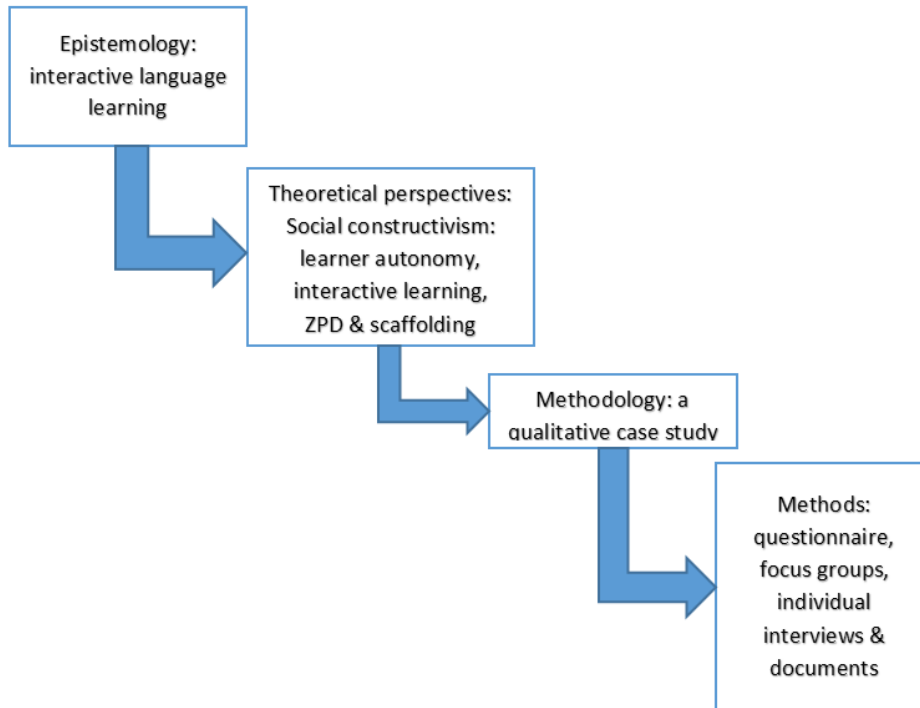


Figure 4. 1. The research design (developed from Crotty, 1998)

Epistemology reflects the “nature of knowledge” (Crotty, 1998, p. 8). Researches are supposed to be grounded in a certain epistemology. Then theoretical perspectives are mentioned to provide a specific context, which contain the “logic and criteria” for the research (Crotty, 1998, p. 3). Under this level is the methodology, which refers to the employed strategy, plan of actions, process of research design, and the use of particular methods in a study (Crotty, 1998). Methods are “techniques or procedures” (Crotty, 1998, p. 3) for gathering data regarding specific research questions.

Informed by SCT (Vygotsky, 1978; 1986), learners intentionally construct their knowledge through experience with the world and corresponding reflections (Duffy & Jonassen, 2013). This focuses on the mediated nature of language learning, claiming

that language knowledge is derived and constructed by learners through intentional interaction with the world via various mediations in a social context (Lantolf & Thorne, 2006; Vygotsky, 1978). The study has been situated in a context, where learner interaction is between different cultural inputs, teachers and learners, as well as peer learners in the process of learning. Language learning in an interactive context is introduced as the epistemology of the current study.

In line with the epistemology of interactive language learning, social constructivism is adopted as the umbrella theoretical perspective of this study. According to social constructivism, meaningful interactive learning occurs through effective response, internal and external negotiation, arguing against points, adding to evolving ideas, and offering alternative perspectives with one another while solving some real tasks (Jonassen et al., 1995; Lapadat, 2002; Lave & Wenger, 1991; Vrasidas, 2000; Vygotsky, 1978).

Recent online multimedia-supported EFL learning research has been frequently “cross-fertilized” (Dörnyei, 2007; Lamb, 2012) by other perspectives in sociocultural theories, such as the concept of ZPD, social interaction, scaffolding, etc. (Chen & Ching, 2011; Nah, White, & Sussex, 2008; Warschauer & Lee, 2012; Wu, Yen, & Marek, 2011). Four subordinate theoretical perspectives — learner autonomy, interactive learning, ZPD, and scaffolding, underpinned by SCT — are employed to

examine Chinese university EFL students' perceptions of and engagement in EFL learning with an integration of modern ICTs.

Case study is a widely-used approach in qualitative education research (Denscombe, 2010; Gall, Gall, & Borg, 2007; Yin, 2013). A qualitative case study design is employed in this study as the research methodology (Creswell, 2013). This is a common approach to explore an issue “using a case [or cases] as a specific illustration” (Creswell, 2013, p. 97). Case study focuses on “one (or just a few) instances of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance” (Denscombe, 2007, p. 36). By employing a case study, researchers could use multiple methods to view the instance from various perspectives, which may enhance their understanding of features and characteristics of the specific social beings or objects (Denscombe, 2007; Silverman, 2005).

The combination of qualitative and quantitative approaches could lead to a better understanding of a target phenomenon and research subjects (Sandelowski, 2003), which are Chinese university EFL students' perceptions of and engagement in online interactive EFL learning in the present study. Both qualitative and quantitative data collection methods, from a wide range of data sources via different means, are usually supported in a case study approach (Dornyei, 2007; Verschuren, 2003).

The present study adopts both qualitative and quantitative methods. Four instruments are used — a questionnaire, focus groups, semi-structured individual interviews, and documents — to collect relevant qualitative and quantitative data from undergraduate EFL students in a Chinese university. Qualitative data can be analysed for addressing the how question (Yin, 2009). Quantitative data are suitable for providing descriptions of the behavioural component (Amaratunga et al., 2002), which refers to students' learning activities in this study. Both types of data are employed to answer both research questions.

As suggested by some scholars, the strengths of a mixed approach in social science include “enabling triangulation”, “providing richer details”, and “initiating new lines of thinking” (Rossman & Wilson, 1991). It has been validated by previous studies on CALL and interactive language learning (e.g., Almekhlafi, 2006; Chou, 2014; Ciftci & Kocoglu, 2012; Connolly, Jessup, & Valacich, 1990; Saran, Seferoglu, & Cagiltay, 2009; Woo et al., 2011; Wu, 2001; Yang, 2006). These studies indicate that mixed approach can be used for yielding insights into EFL learning and teaching in an online interactive context. Thus, a qualitative case study with quantitative descriptions is adopted in the study to examine Chinese university EFL students' learning in an online interactive environment.

4.2 Research context

There are two levels of universities or colleges in China's higher education system: the university level, which focuses on students' academic development, and the college level, which concentrates on students' professional development in a specific discipline. This case study was conducted in a Chinese university, since compulsory College English courses that follow uniform curriculum requirement are taught there, which can provide a contrast to participants' autonomous online English learning.

Prior to the commencement of this study, letters requesting permission to conduct the research were sent to different levels of the universities (from the first-tier to the third-tier in China's education system). One university in Chongqing agreed to be the research site for this study. It is one of the first-tier universities in China.

The online interactive video-based English learning platform was produced by a large Australian Research Council (ARC) Linkage project: Image, perceptions and resources: Enhancing Australia's role in China's English language education (2011—2014). As a research-based English learning platform, it has been highly recognized by experts, teachers, students as well as the stakeholders of the project. Four research partners of the project are the University of Sydney, Queensland University of Technology, Fudan University Press (FUP) and Foreign Languages Teaching and Research Press (FLTRP).

This English language learning platform provides Australian-oriented digital learning resources for Chinese university EFL students. To date, it has 12 sampling modules, covering a range of topics in life for example, Australian inventions, university life and Aboriginal arts. All themes are closely related to students' life and study in the English language. Each module consists of one set of authentic videos and two sets of pedagogical audio materials. The set materials well consider Chinese EFL students' language competence and provide both grammatical and pragmatic knowledge for them to learn. Tasks have been designed and informed by the concept of ZPD. Students, being able to rely on their prior knowledge and skills, are scaffolded to learn the language and cultural knowledge from the materials via the platform which has exemplary materials (texts, images and audios). Research evidence indicated that these learning materials are suitable for Chinese EFL university students, facilitating them to enhance their English language knowledge and related cultural knowledge (Shen, Yuan, & Ewing, 2015). Each two- to three-minute long authentic video is supported by pedagogical audio materials, learning tasks, scripts and notes to scaffold learners in the learning, which enables students to gain better and deeper understandings of the theme. Students can develop their English language capacities once they complete the learning tasks with scaffoldings.

As ICTs provide greater convenience to users in communication and interaction, interactive learning becomes workable and accessible. Students are allowed to interact

or discuss with peers and teachers synchronously in learning, as well as to leave messages without time and location limits. All digital resources are allocated on FLTRP's website or some universities' intranet. Students are able to access these materials via the Internet or intranet at any time to learn English. Additionally, technologies also encourage the development of learner autonomy in language learning (Schwienhorst, 2003; Sockett & Toffoli, 2012). Students are supposed to take responsibilities for their own English language learning in after class study. It is responsive to the requirements of the CECR (MoE, 2007), which encourages Chinese EFL university students to use computers to improve their autonomous learning abilities and intercultural awareness in English language study. This helps provide higher level of learner autonomy in the learning process.

This study employed three modules, whose topics are: Welcome to the University of Sydney, Australian inventions, and Waltzing Matilda. Each module included a complete set of videos, audio materials, scripts, notes and tasks. Evidence collected from these three cases were coded, categorized and analysed to demonstrate Chinese university students' online English learning practice.

The ARC project concluded that a popular EFL learning website applied in the Chinese context should be pedagogically-oriented and learner-centred. There should be rich and well-organized learning resources, including current and examination-oriented materials and (non-) Anglophone countries topics and contents,

to cater for learners of varied language proficiencies. The design of the website should be easy to access and navigate, with clear informative and directive language (Kettle et al., 2012; Shen, Yuan, & Ewing, 2015; Yuan & Shen, 2014). These findings led to the design of an online interactive video-based English learning platform that was employed to collect data for the current study as this research-based platform might satisfy Chinese EFL university students' learning needs and scaffold their learning. The platform provided an interactive online learning environment for Chinese EFL university students to acquire both language knowledge and cultural knowledge to enhance their language competence. Students could access the platform to learn and practice English after class autonomously.

4.3 Participants

Participants of this study were a group of 154 non-English major second-year undergraduate students in a first-tier university in southwestern China. All non-English major university students in China are required to complete College English as a compulsory subject for two years (four semesters). Participants of this study were enrolled in the fourth semester in their College English learning. They were supposed to be competent English language users, as well as skilful computer users, who were able to use computers to complete English language learning on the digital learning platform. All participants were native speakers of Chinese mandarin. English language was their foreign language. All participants were invited to complete a paper-based questionnaire.

Twenty-four of the participants, who completed the questionnaire, were invited to conduct online EFL learning on the provided video-based digital platform after class. Sixteen of them were invited to participate in two focus groups (eight in each group) one week after the completion of online EFL learning, and eight students were interviewed individually in a face-to-face way so as to acquire empirical data on their experience of learning EFL online. All participants attended the research anonymously and their participation in the research was on a voluntary basis.

4.4. Data collection

A variety of methods were employed to collect data from different sources, facilitating researchers to validate the findings from various resources (Denscombe, 2010; Robson, 2011; Yin, 2013). Informed by previous research (e.g., Chou, 2014; Connolly, Jessup, & Valacich, 1990; Dehaan et al., 2012; Engin, 2014; Hung, 2009; Pu, 2009; Rose, 2014; Saran, Seferoglu, & Cagiltay, 2009; Woo et al., 2011), four methods were utilised for data collection in this study: a questionnaire, individual interviews, focus groups, and documents.

4.4.1 Questionnaire

Questionnaire is a data collection instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Gault, 1907). Questionnaire is one of the primary methods for collecting data in a case study,

as it can support researchers to obtain information from a broad perspective (Denscombe, 2007).

As all respondents face the same questions, a questionnaire provides researchers with standardized answers (Dornyei, 2007). It is an easy and fast instrument to arrange and to conduct for data collection (Denscombe, 2007). It is also suitable for gathering information from a large number of subjects (Mathers, 2009). Questionnaire is a widely-employed instrument for studies on language learning (e.g., Engin, 2014; Hung, 2009; Pu, 2009; Rose, 2014; Saran, Seferoglu, & Cagiltay, 2009; Woo et al., 2011).

In this study, a questionnaire was employed to collect data about participants' demographic information, learning motivations and goals, learning experience, and perceptions of online EFL learning approaches. This method was expected to address both research questions, regarding EFL students' perceptions of and engagement in online interactive language learning. Questions were developed from previous studies (e.g., Beven, 2010; Mak, 2014; Pu, 2009; Rose, 2014; Tasker, 2012; Yuan & Shen, 2009). Three types of questions were designed to serve the aims: five-point Likerts, multiple choices, and open-ended questions.

Five-point Likerts were used to collect data about learning motivations and goals, and perceptions of online EFL learning approaches. In this section, a total of 33 Likert

questions were administrated with five-point choices ranging from: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree. A sample of these questions in the study was: *It is a trend to use the Internet in English learning*. Results of this type of questions in the questionnaire were compared with those of previous studies (e.g., Conttia, 2007; Lear, 2012; Mak, 2014), leading to understandings of Chinese university EFL students' language learning in the specific online context.

Multiple choices were used to gather data about participants' demographic information, learning experience, and perceptions of online EFL learning. Participants chose the best suited answer from the provided four or five options in these questions. Four multiple choices were employed in the study. A sample of these questions was: *What do you do when you have some difficulties in your English learning?*

Open-ended questions give spaces to participants to express themselves by using their own words (Denscombe, 2007). Two open-ended questions were used in the study for gathering information about students' perceptions of two distinctive EFL learning and teaching approaches. The two open-ended questions in the study were:

Are you satisfied with the current College English learning/teaching? Why/Why not?

What benefits do you think you can obtain from online English learning?

The full questionnaire is attached in Appendix I.

Considering this was not a language test, and participants were all non-English major students, this questionnaire was in Chinese, which was all participants' first language. Participants were also allowed to use English or Chinese to answer open-ended questions, while all of them chose Chinese in the study. This aimed to ensure that participants could comprehend the questionnaire without misunderstandings, and express themselves as precisely and accurately as possible. All transcripts in this study, both from the questionnaire and from interviews, were translated and back-translated by professional and experienced translators to maximize the validity.

4.4.2 Interviews

As a major approach in case study to collect qualitative data (Merriam, 2009), semi-structured interviews are efficient to encourage interviewees to express their ideas and perceptions freely in a reflexive way (Neuman, 2010). It usually operates under the guide of questions and topics, and follows interviewees' responses (Li, 2006). Semi-structured interviews are a widely-employed instrument for data collection in many EFL learning studies, for providing self-reported information about students' learning experiences and perceptions (e.g., Hung, 2009; Lai & Gu, 2011; Lin, Groom, & Lin, 2012; Lim & Shen, 2006; Lu, Throssell, & Jiang, 2013; Saran, Seferoglu, & Cagiltay, 2009; Smith & Craig, 2013).

Interviews followed the guide of both research questions. There were three guiding topics for students to talk about in the interviews: their online learning experience (e.g., their engagement, obstacles they faced, and strategies they adopted), their perceptions of online learning and traditional learning (e.g., preferences of learning materials, attitudes towards learning with digital tools, and expectations of online EFL learning), and other learning issues (e.g., their learning aims, their learning obstacles, and their previous learning experience). Participants of the study were expected to follow the guide of these topics in their interviews. But they were not strictly restricted by these topics. Instead, they were encouraged to express themselves freely in a reflexive way (Neuman, 2010).

The current study conducted two types of semi-structured interviews: focus groups and individual face-to-face interviews, addressing both research questions. Two sessions of focus groups were conducted after students completed their EFL learning on the provided online interactive video-based platform. As suggested by previous scholars (Merriam, 1998; Yuan, 2014), in a focus group session, participants, with similar experience and knowledge in online interactive EFL learning, have discussions on their learning from their individual perspectives. It leads to consensus and shared understanding of the learning, as well as debates and disapproval, which may trigger more ideas in interviews. It enables researchers to obtain more evidence regarding their learning experience, and a deeper understanding of their perceptions of

online EFL learning. Based on the principles of focus groups proposed by Denscombe (2014), each group had eight participants and each focus group lasted for around 1½–2 hours. The focus groups were guided through a list of questions for example:

What did you expect to learn from the platform prior to the commencement of your online learning?

Focus group questions were developed from previous research (e.g., Lear, 2012; Pu, 2009; Watson, 2007; Yu, 2014), and the results from these empirical studies were used as references (Li, 2006). Questions regarding participants' online EFL learning on the provided platform were also raised. The full focus group questions are attached in Appendix II.

Apart from the focus groups, eight students were invited to participate in individual face-to-face interviews on a voluntary basis. Each interview lasted for around 40 minutes to examine participants' perceptions of the online learning platform they used to develop their language knowledge and skills, as well as their learning experience on the platform. Individual interviews allow for abundant opportunities for researchers to gain an in-depth understanding of students' viewpoints (Denscombe, 2014). Individual interview questions were developed from previous studies (e.g., Fan, 2011; Hüseyin, 2014; Nguyen, 2013; Pu, 2009; Yu, 2014) and based on the results of the questionnaire. Participants' online EFL learning

practice was also used as a reference to the individual interviews. A sample of these questions was:

What are advantages/disadvantages of employing digital materials in English learning?

The full list of questions for individual interviews is attached in Appendix III.

Both interviews were conducted in Chinese mandarin, which was all participants' L1. It ensured their understanding of the provided interview topics, and enabled them to express their opinions more freely and accurately. All transcripts were tape-recorded with the permission of participants. They were translated into English language by professional and experienced translators afterwards for further analysis.

4.4.3 Documents

Documents are employed as a method for qualitative study in social science by recording written materials for analysis (Stemler, 2001; Weber, 1990). As an effective method to probe into thoughts and unintentional messages, documents have the capacity to dig out tangible evidence about learning and teaching (Krippendorf, 2013). This method of data collection is widely seen in many previous studies on EFL learning and CALL (e.g., Ciftci & Kocoglu, 2012; De Boer, 2007; Lu & Bol, 2007; Wu, 1993; Yu & Lee, 2014; Zahn et al., 2012).

Two types of documents were collected for this study: digital learning resources used on the learning platform, and participants' learning documents, including their answers to learning tasks, and their interaction logs, generated in their learning process. Data gathered from documents were used to investigate how online digital learning resources assisted Chinese university EFL students to develop their language competence and learning skills.

Digital learning resources employed in the platform, such as audio-visual resources, text materials, learning tasks, and scaffolded materials, were collected, coded and categorized into different themes in terms of theoretical perspectives and research questions. Participants' online learning, interaction, and discussions were recorded via screen recordings.

4.5 Research procedures

The entire case study occurred in the second semester of Academic Year 2015 to 2016 (i.e., March 2016 to June 2016). In order not to disturb students' learning in the university, the study was conducted outside of their routine learning time.

4.5.1 Participants

All participants were recruited at the beginning of Semester 2 of Academic Year 2015 to 2016 (on March 21, 2016), with the support and assistance of the undergraduate liaison officer of the university in Chongqing, China. Participants were

informed of the research aims, significance, procedures, and their rights in this case study before the commencement.

After returning the paper-based questionnaire, which presented the Participant Consent Form at the same time, the 154 students formally became the participants of the case study. They all participated in the study on a voluntary basis.

4.5.2 Research procedures

After the recruitment of participants, the study formally began on March 28, 2016. Four sessions were conducted for data collection, which were illustrated in the Table 4.1:

Table 4. 1

Data collection procedures

Session	Date	Activities
Session 1	Mar. 28, 2016	Questionnaire Participant' consents
Session 2	April 2016	Online EFL learning
	Apr. 11–Apr. 17	Learning Module 1
	Apr. 18–Apr. 24	Learning Module 2
	Apr. 25–Apr. 30	Learning Module 3
	April–May 2016	Digital learning document collected
Session 3	May 2016	Participants' learning document collected
	May 2016	Focus groups

	May 11, 2016	Focus group 1
	May 12, 2016	Focus group 2
Session 4	May 2016	Individual interviews
	May 18, 2016	Individual interviews, session 1
	May 19, 2016	Individual interviews, session 2

In Session 1, participants were surveyed via a questionnaire. A paper-based questionnaire was distributed to participants in the classroom with the help of the undergraduate liaison officer. Participants were given up to 45 minutes to complete all the questions in the questionnaire and returned it to the researcher. Together with the questionnaire, Participant Consent Form and Participant Information Statement were attached. Returning the questionnaire indicated their approval to be involved in this study.

In Session 2, participants were given three weeks for their online EFL learning with three learning modules on the provided platform. In the first two modules' learning, each learning lasted for exactly one week (from Apr. 11 to Apr. 17 for LM1; from Apr. 18 to Apr. 24 for LM2). Due to public holidays, the third module only lasted for six days (From Apr. 25 to Apr. 30). On every Wednesday of the three weeks, the researcher revealed several discussion topics to participants for interactive learning activities. These topics were presented at the middle of each learning module to allow abundant time for students to obtain enough information from their online learning, as well as to leave enough space for not disturbing the next module's

learning. These discussion topics were developed from the online learning platform, whose contents were closely related with materials used in their EFL learning. Some samples of these discussion topics were:

Please briefly introduce a university you are familiar with.

From your perspective, which company in China can be described as “being creative”?

The full list of discussion topics for interactive learning is attached in Appendix V.

At the same time of participants’ online learning, digital learning documents were collected, including the audio-visual resources, text materials, learning tasks, scaffolded materials, and so on.

After participants completed three learning modules on the platform, documents about their online interaction, discussions and cooperating learning were recorded and collected in Session 3. Two focus groups were also administrated in this session. They were conducted on May 11 and May 12 of 2016. Each focus group had eight participants. Both were tape-recorded. Transcripts of the two focus groups were collected.

In Session 4, individual interviews were conducted for data collection. A total of eight participants were invited to the face-to-face interviews on May 18 and May 19 of 2016. All interviews were tape-recorded, and their transcripts were collected.

4.6 Data analysis

Data analysis helps researchers to interpret and analyse the collected raw data, via which researchers can probe into the nature of the things being studied by identifying the key parts (Denscombe, 2007). This is a qualitative case study with quantitative descriptions. The collected quantitative data from the questionnaire were used to support the qualitative data as statistical descriptions. The raw quantitative data were coded and presented in the forms of descriptive analyses, including numbers, percentages, and means by using Statistical Package for the Social Science (SPSS) Version 24.0. Tables and charts, which are concise and effective, were used to present the results of data analysis (Denscombe, 2014). Qualitative data gathered from the questionnaire, focus groups, individual interviews, and documents were coded and categorized into different themes for investigating EFL students' perceptions of and engagement in online language learning.

Various methods were employed for data analysis, including coding, categorization and triangulation. Coding of both qualitative and quantitative data was informed by the theoretical framework of the present study, which incorporated four strains of constructs in a CALL context: learner autonomy, interactive learning, ZPD

and scaffolding. Primary findings from both qualitative data and quantitative data were triangulated. The final findings were used to address the two research questions of the thesis.

Some previous literatures have confirmed the use of these methods to analyse data for examining topics in a similar context or research with a related focus (e.g., Conttia, 2007; Mak, 2014; Pawlak & Kruk, 2012; Razak, Saeed & Ahmad, 2013; Shen, Yuan & Ewing, 2015; Yu, 2014; Yuan & Shen, 2009). Table 4.2 shows a summary of data collection methods and data analysis methods that are informed by different theoretical perspectives:

Table 4. 2

Summary of data collection and data analysis

Research questions	Theoretical perspectives	Data collection methods	Data analysis
RQ1: What are Chinese university EFL students' perceptions of learning EFL on an online interactive video-based learning platform?	CALL	Questionnaire	Statistical
	Learner autonomy	Individual interviews	Categorical
	Interactive learning	Focus groups	Descriptive
	ZPD		Interpretive
RQ2: How does this group of students learn EFL via an online interactive video-based learning platform?	Scaffolding		
	CALL	Individual interviews	Categorical
	Learner autonomy	Focus groups	Descriptive
	Interactive learning	Documents	Interpretive
	ZPD		
	Scaffolding		

The following Figure 4.2 illustrates the data analysis process of this study:

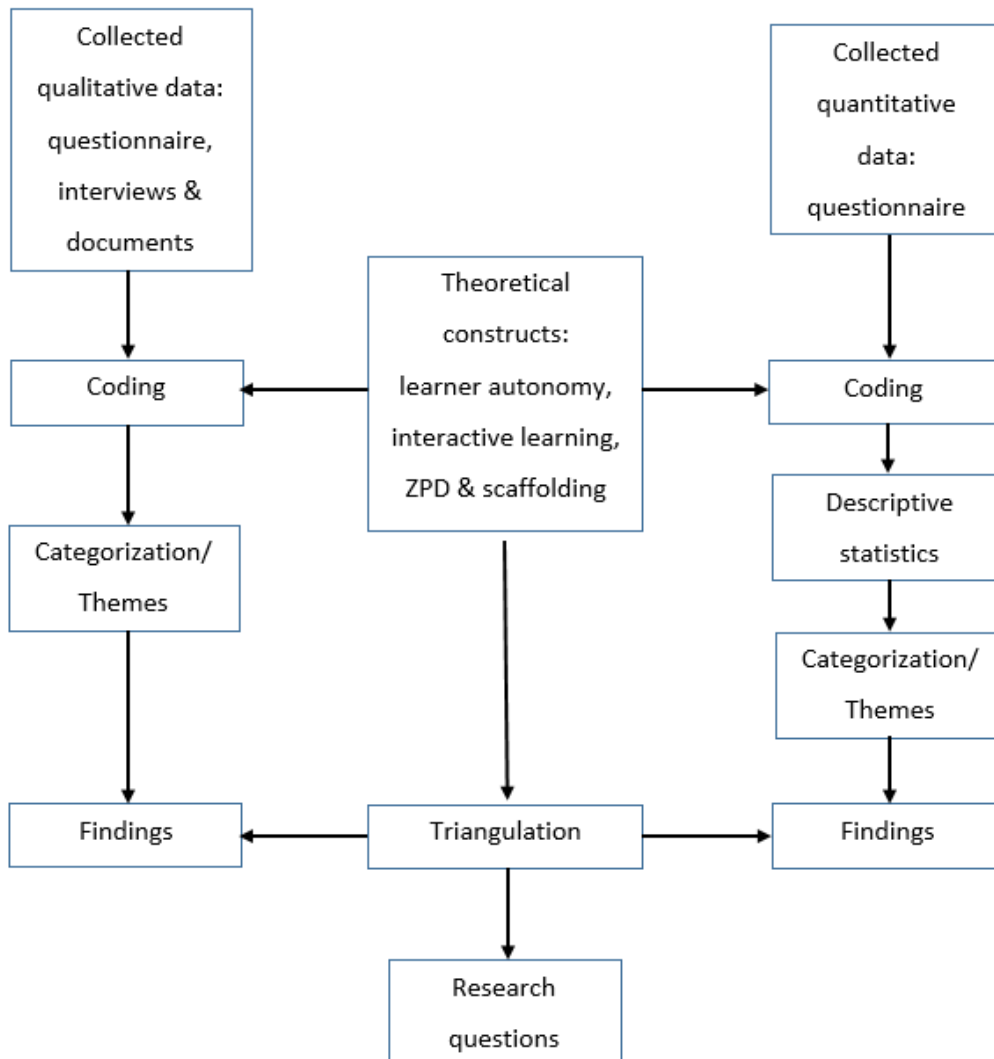


Figure 4. 2. The process of data analysis

4.7 Validity and reliability

The concepts of validity and reliability are often closely related with each other, as reliability is a pre-requisite of validity in social science research (Nunan & Bailey, 2009). This part illustrates how the present study maintains the validity and reliability of data collection and data analysis.

Validity is a crucial factor to evaluate the quality of a certain study. Validity of a case study is considered to related to “the honesty, depth, richness and scope of the data achieved” (Cohen, Manion, & Morrison, 2009, p. 150). The current study ensures the validity through employing a wide range of instruments for various sources of data and for multiple perspectives of interpretation. That is, four different instruments were used in the present study for data collection: a questionnaire, focus groups, individual interviews, and documents. Both qualitative data and quantitative data were gathered and analysed to reveal information about EFL students’ online language learning. Validity can be achieved by applying these measures to the research questions of the study (Yin, 2013).

In addition, prior to commencement of the study, four Chinese university EFL teachers with more than ten years teaching experience were approached to trial the questionnaire. Their understanding and feedback on the questionnaire were used to modify the questions applied, ensuring the valid data collection (Goodman, Meltzer, & Bailey, 1998).

Reliability is another concern in qualitative research (Denzin & Lincoln, 2011). Consistency is valued in a qualitative research for the purpose of producing trustworthy conclusions. By adapting and developing from previous studies (Abedin, Daneshgar, & D’Ambra, 2011; Beven, 2010; Yin, 2013; Yuan, 2014) to address the

issue of reliability, three measures were introduced into the current study: 1. L1 was used in the questionnaire and interviews to ensure the reliability; 2. the categorization was established on the basis of two research questions within the theoretical framework; and 3. member checks were employed to avoid incorrect interpretation.

4.8 Ethical issues

As human beings were involved in the research, ethical issues associated with the research have to be considered in carrying out this study. The present study was conducted with the approval of the Human Research Ethics Committee of the University of Sydney. All the participants were informed of the purposes, significance, and procedures of this research prior to commencement. They were fully aware of their roles in the project and got adequate preparation for the study. Every participant could withdraw from the study at any point of time without repercussions. Their participation was on a completely voluntary basis. All the research data were kept securely and confidentially. To ensure anonymity, participants were identified with pseudonyms in all research processes.

Chapter 5 Data report

The previous chapter presented the research design of this study, including research methodology and data collection methods. Four specific instruments: the questionnaire, focus groups, individual interviews and documents are employed in this case study. Both qualitative and quantitative data on this group of EFL students' perceptions of and engagement in learning EFL via an innovative online video-based platform are collected via these four instruments. This chapter reports the results of the data regarding two research questions of the present study focusing on online interactive learning.

5.1 Study context and demographic information

This part reports findings on the context of the research and the demographic information of participants. It specifies the study range. Of all 154 participants in the questionnaire, ninety-two (59.7%) students were aged between 20 and 21, while forty-eight participants (31.2%) were aged between 18 and 19. Only fourteen students (9.1%) were aged over 21 (Q1). Forty-one (around 26.6%) participants were males and 110 (around 71.5%) were females. Three of them (1.9% of all participants) preferred not to mention their genders in the questionnaire (Q2).

Regarding their language learning experience (Q3), all participants (n=154) had been studying English in various educational institutions in China for at least two years. The longest learning period was reported to be 15 years in the questionnaire.

Average learning years of all participants were around 10. As many as 121 students (nearly 80%) had been studying English for 7 to 12 years. Twenty-eight of them had been studying English for more than 12 years, with only three students less than seven years. As for participants' education background (Q3), only seven students had overseas living or studying experience, approximately 4.5% among their peers. Table 5.1 provides a summary of these participants' language learning and use experience:

Table 5. 1

Demographic information

Item	Number	Percentage
Lengths of English learning		
Less than 7 yrs	3	2%
7-12 yrs	121	79.6%
More than 12 yrs	28	18.4%
Overseas experience		
Yes	7	4.5%
No	147	95.5%

When it comes to standard language tests (Q4), 150 participants had taken the National College Entrance Examinations (NCEE). Of these participants, 74% got more than 120 grades (out of 150). That was traditionally recognized as “high scores” in this test in a Chinese educational setting. Approximately 16.7% of all participants (25 students) got more than 90% grades in this nation-wide examination. The highest score was 147.0 and the lowest was 80.0. On average, students got a score of 124.2.

As one of the most widely accepted English test nationwide in the university, College English Test (CET) Band–Four aims at examining the English proficiency of Chinese university students. All university undergraduate students in China are suggested to pass CET Band–Four (to gain at least 60% grades). One hundred and forty-seven students of all the 154 participants (95.5%) reported to sit CET Band–Four. Among them, 127 students (86.4%) had passed this examination. In terms of CET Band–Six, which is generally thought to be more challenging than CET Band–Four, 58.4% of all participants reported to take this examination, and half of these students had passed the test. In the questionnaire, only one student (0.06% of all participants) reported to sit IELTS and got an overall score of 6.5. No one had taken TOEFL or other standard English tests.

5.2 Students’ perceptions and employment of CALL

5.2.1 Perceptions of CALL

This section provides findings regarding a CALL context for Chinese university EFL students’ learning. Their perceptions of and engagement in technology-supported EFL learning are presented. Regarding EFL learning in a CALL context, participants highlighted the benefits of computer- and technology-supported language learning, particularly online EFL learning. Open-ended Question 37 (*What do you think the benefits are for online English learning?*) looked at students’ perceptions of the

benefits of online English learning. A wide range of benefits were mentioned by a total of 145 participants. The results are reported in Figure 5.1:

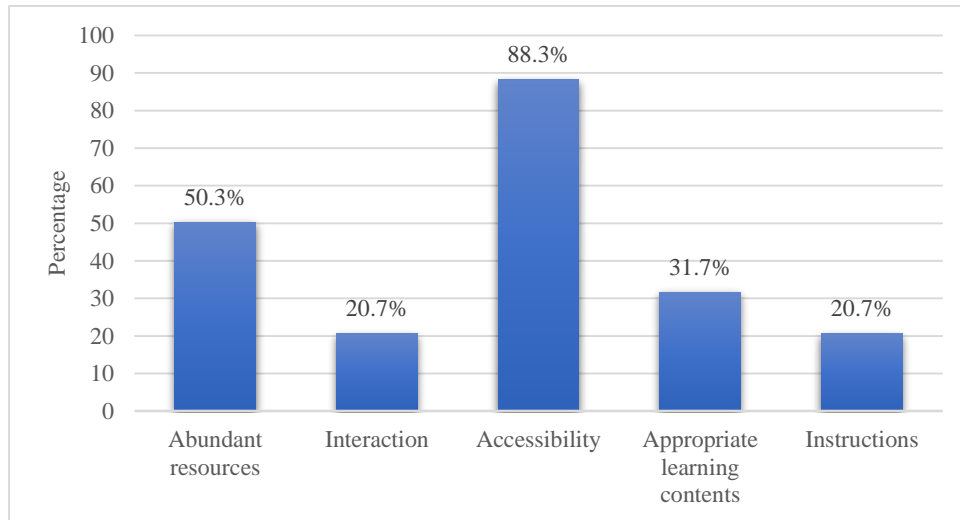


Figure 5. 1. Perceived benefits of online English learning

As the data indicated, accessibility to learning was mentioned by 128 times in the questionnaire, occupying 88.3% and ranking as the biggest benefit of online EFL learning. Another benefit mentioned by students repeatedly in the questionnaire was the learning materials. A total of 73 students (50.3%) expressed their positive perceptions that they could employ a wide range of EFL learning materials via the Internet.

There were also 63 students (43.4%) who believed that an online context could make EFL learning interesting and attractive. The new context provided different learning experiences from that of in-classroom learning. Forty-six participants (31.7%) said online learning provided an opportunity for them to choose learning content that

were suitable for their current language levels. Besides students also mentioned that modern ICTs made communication and interaction with peer learners and teachers easier. Instructions were also thought to be a merit of online language learning. Some students' comments in the Open-ended Question 37 are listed below, from which the study could obtain some insights into their reasons for preferences of online EFL learning and teaching:

Table 5. 2

Participants' perceptions of online EFL learning and teaching

Perceptions	Descriptions
Convenience & Accessibility	“The Internet makes interaction much more convenient.” “With the Internet, I could choose a comfortable and relaxed environment for language learning at any time.”
Autonomy & Student-centred learning	“I prefer interactive learning activities where I was allowed to play a central role, instead of being assigned a role by my teacher.”
Autonomy & Learning materials	“By autonomously selecting and employing materials from the Internet, I do need to worry that they might be either too difficult or too easy.”
Distraction	“Computers might distract my attention in the learning process, as I am not good at self-control, particularly in English learning.”

In individual interviews and focus groups, participants provided more details about their preferences and employment of online learning for promoting their language ability and knowledge development:

Digital devices, such as computers, iPads, intelligent mobile phones, and electronic dictionaries, are routine learning tools for English practices. I frequently use them for practicing my English language, so do my classmates. (Emily: 18 May 2016)

I preferred digital tools for language learning than traditional ones. They are significantly more convenient, affordable, and durable. Using traditional learning tools is troublesome, with many obstacles to my language practices. (Ben: 11 May 2016)

Yes, they (digital learning tools) have such benefits. And at this stage, I believe they are irreplaceable in language learning practices. Traditional tools might not fulfil my needs in learning. (David: 11 May 2016)

To engage in online EFL learning, students needed to employ various digital devices, including computers, tablets, and mobile phones. Their perceptions of using these digital devices for online language learning were investigated in this study. As can be seen from Question 25 (*English learning becomes interesting and attractive by using computers and the Internet*), a majority of participants (91 of 154, 59.1%) agreed that technology made English learning interesting and attractive. The result is shown below in Figure 5.2:

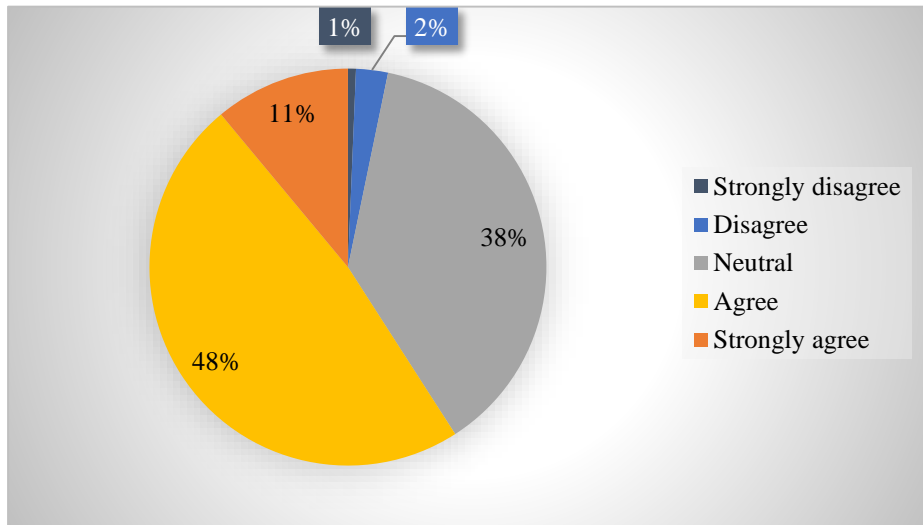


Figure 5. 2. Participants' perceptions of using digital devices for language learning

Besides attractiveness, it was also discovered that some other merits of digital learning tools and resources were perceived by participants. Students described their experience of using digital tools in language learning:

Digital devices significantly reduce my learning burden. After all, it is much easier for me to look up a specific word on the computer than in a thick dictionary. It can always provide straightforward instructions for me. (Bob: 12 May 2016)

Intelligent devices, such as mobile phones, could spot my learning needs, since it builds its content on big data. That is really helpful for my language development.

Sometimes I even feel it knows about me better than myself. (Monica: 12 May 2016)

Regarding many benefits for language learning, participants in the present study also mentioned their willingness to continue to use digital tools for language development in the future. For example:

I would very possibly insist on future language learning on the computers. Since it significantly enhances my learning performance and outcomes. (Zoe: 12 May 2016)

Finally, students concluded:

Learning English on the Internet via digital devices is attractive, impressive, and enjoyable. (Olivia: 11 May 2016)

They are effective and efficient for language learning. (Betty: 19 May 2016)

Table 5. 3

Participants' views on online EFL learning

Question	SD	D	N	A	SA	Mean	Std.D
Q22	0/0%	23/14.9%	29/18.8%	76/49.4%	26/16.9%	3.68	0.930
Q24	0/0%	7/4.5%	33/21.4%	99/64.4%	15/9.7%	3.79	0.673
Q38	31/20.1%	71/46.1%	19/12.3%	19/12.3%	14/9.1%	2.44	1.204
Q42	38/24.7%	84/54.5%	18/11.7%	8/5.2%	6/3.9%	2.09	0.959

Q22. Online learning encourages me to change the way I study English.

Q24. It is a trend to use the Internet in English learning.

Q38. I do not think that computers/the Internet can make innovations to English learning.

Q42. I do not want to learn English online as it is a different learning approach from my peer classmates.

In terms of using the Internet to facilitate English learning with many benefits, it was believed to become a trend among participants. As Table 5.3 indicated, only seven students (4.5%) disagreed with this point (Q24). Most students (102 of 154, 66.3%) believed that the Internet and computers encouraged them to change their way to learn English (Q22). A majority of EFL students in the study (102 of 154, 66.2%) indicated that computers and the Internet can make innovations to current English learning (Q38). Only very few students (14 of 154, 9.1%) were concerned that learning language on the Internet would be different from their peers. The low mean of 2.09 also displayed participants' confidence in online language learning as a widely-accepted learning approach among their peers (Q42).

5.2.2 Learning in a CALL context

When being surveyed about their attitudes towards CALL and online learning, participants of the present study indicated they treated it as a formal learning approach.

For example:

It (online language learning) is of no essential difference from in-class English learning and teaching. I treat it with a very serious attitude. (Chloe: 19 May 2016)

Like our English classes, I study English on the Internet on weekdays. ... Not on weekends. Weekends are for gaming, for entertainment, for dating. Not for learning. (Susan: 12 May 2016)

As a routine learning approach that was frequently employed by participants in the study, online EFL learning was thought as an important constituting part of their language development. It was not only involved in their language learning, but also imposed influence on their social interaction, as students discussed in the focus groups:

Online learning is a fashionable way for language development. That means everyone I know learns English on the Internet after class. Literally everyone. You can hardly find one person who does not do that. (Gloria: 18 May 2016)

Absolutely. It is fashionable. And if I still used the old-fashioned way for learning, my classmates would treat me as “a stick-in-the-mud”. What would you say, Lydia? (Julia: 11 May 2016)

An isolated person. I would not have made friends with you. (Lydia: 11 May 2016)

Participants’ time investment into online EFL learning was investigated in the study. It may be able to reflect their attitudes towards this new learning approach. It

was found that students preferred to use fragmented time for online learning, which had difference from their learning in the classroom:

I prefer short-time practices. Long-time learning? I might probably quit it. (Flora: 11 May 2016)

Fragmented-time learning, I guess that it is the term. I strictly control my learning time within half an hour each time. That is my way to ensure my focus. (Roy: 18 May 2016)

Fragmented time enables me to engage in learning activities as long as I get a piece of time. I mean, I do not need to prepare a whole period of time for learning. I could do that at any time I want to. (Chloe: 19 May 2016)

Students also pointed out their perceived merits of fragmented time for language learning. One of them was to effectively help them focus on learning activities.

I always spend 15–30 minutes on each session. Learning is not easy. Drawing my attention on one specific thing, like learning, for a long time in such a resource-rich context, is more difficult. (David: 11 May 2016)

Learning in fragmented time gives me a sense of self control. Losing focus in learning activities is always depressing. Fragmented-time online learning protects me from that negative feeling. (Tina: 12 May 2016)

Except from time investment, students' choices of learning environment were also examined. Participants pointed out in the open-ended Question 37 that they preferred a comfortable and relaxed environment for online language learning:

As modern technologies provide such convenience and accesses to language learning via the Internet, I could choose a comfortable and relaxed environment for learning. I believe in this environment, I could maximize my performance and achieve the best outcome. (From Q37)

I would choose a familiar environment for online learning. It promises a sense of security. That is important since it could encourage me to carry on my learning.

After all, learning is challenging. (From Q37)

In the interviews, EFL students' learning environment was further investigated. It was found that dormitory rooms were the most chosen places for online learning. Some other popular locations were libraries, classrooms, and cafes. Generally, the finding was in line with their indications in the questionnaire; that is, students preferred a comfortable and casual environment for online language learning. For example:

Dormitory room is the best choice. I do not need to care about anything else, such as library closing time. I could invest all myself into learning, which might enhance performance in learning. (Flora: 11 May 2016)

My choice is my own room in my home. As a local student, I could live in my home instead of a dormitory room. I could learn English all by myself without interruptions, and in a relaxed way. It is always the best choice for doing everything, including online learning. (Tina: 12 May 2016)

5.2.3 Comparison between CALL and traditional in-class learning

Compared with a CALL context, it was seen that participants in the study were not satisfied with current in-class English learning and teaching. A total of 102 students (68.9%) expressed their dissatisfaction in an open-ended question, which is shown in Figure 5.3:

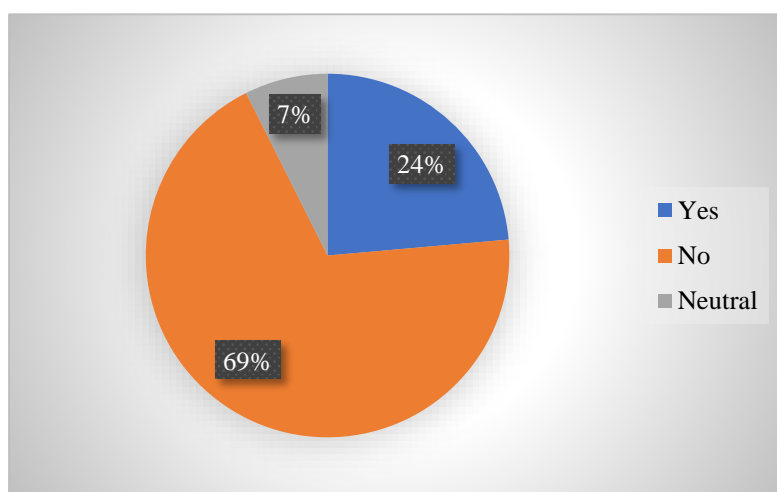


Figure 5. 3. Participants' satisfaction with in-class EFL learning and teaching

Open-ended Question 18 (*Are you satisfied with in-class English learning/teaching? Why/Why not?*) investigated students' perceptions of in-classroom English learning. Ninety-five of 102 participants, who explicitly and clearly expressed

their dissatisfaction with the learning, provided detailed reasons for their choices. In participants' explanations, several factors that might lower students' satisfaction with traditional English learning and teaching were mentioned repeatedly. These mentioned learning obstacles possibly harmed EFL students' learning experience and led to a potential failure in English competence development. Figure 5.4 provides information of these factors:

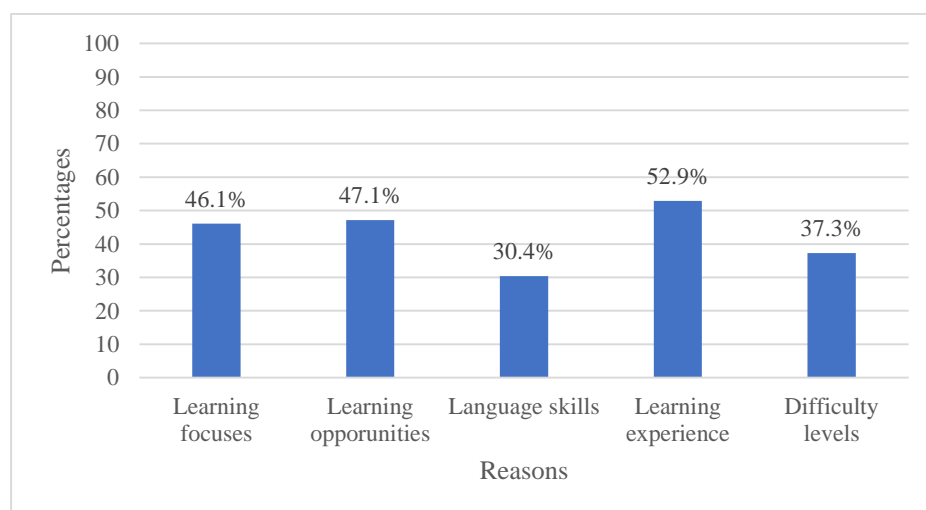


Figure 5. 4. Reasons for dissatisfaction with in-class EFL learning and teaching

As can be seen in the figure above, students stressed the importance of learning experience. It was found that traditional in-class EFL learning experience was not interesting or attractive. Around 56.8% of participants listed it as the main reason that led to their dissatisfaction with current in-classroom learning and teaching. Students also felt their teachers did not provide enough opportunities in the class for students to be involved. This factor was mentioned in the questionnaire by 48 people. Regarding learning purposes, students felt the current in-class EFL learning and teaching focused

on examinations exclusively. Nearly half of all participants (47, 49.5%) mentioned this point. Other reasons were also mentioned by participants, including no suitable difficulty levels (38 times, 40%), and no balanced development of language skills (31 times, 32.6%). Some other viewpoints from students are listed below:

Table 5. 4

Participants' dissatisfaction with in-class EFL learning and teaching

Reasons	Descriptions
Language contexts	<p>“There is no English language context for me. Everyone says Chinese mandarin in the classroom.”</p> <p>“Only a bit of English is used in the classes. That is not possible for me to practice my language.”</p> <p>“It was less effective to learn a language by using paper-based books.”</p>
Limitations	<p>“There are not enough learning opportunities for me, neither in the classroom, nor after class.”</p> <p>“Relying on teachers seems to be not a good idea to develop my language abilities. Thus, I spend some leisure time on language learning after class.”</p>
Interaction & Foreign language anxiety	<p>“For interactions in the classroom, I am just sitting there, instead of being a member of the team.”</p> <p>“I could say nothing from the beginning to the end. ... I am afraid of being laughed at by my classmates.”</p>

5.2.4 Challenges in a CALL context

As online EFL learning and teaching were perceived to be beneficial to EFL students' language development, it was largely employed by current university students. However, it should be also noted that many participants mentioned some drawbacks of learning EFL in a CALL context. Question 43 (*The Internet will distract learners from English learning*) investigated if students could be able to focus on English learning when overwhelming information swarmed into their eyes. The results varied from person to person. A total of 68 students (40.2%) expressed their opposition or strong opposition to the view, while the number of students who admitted that the Internet would distract them from learning was 66 (29.9%). It is presented in Figure 5.5:

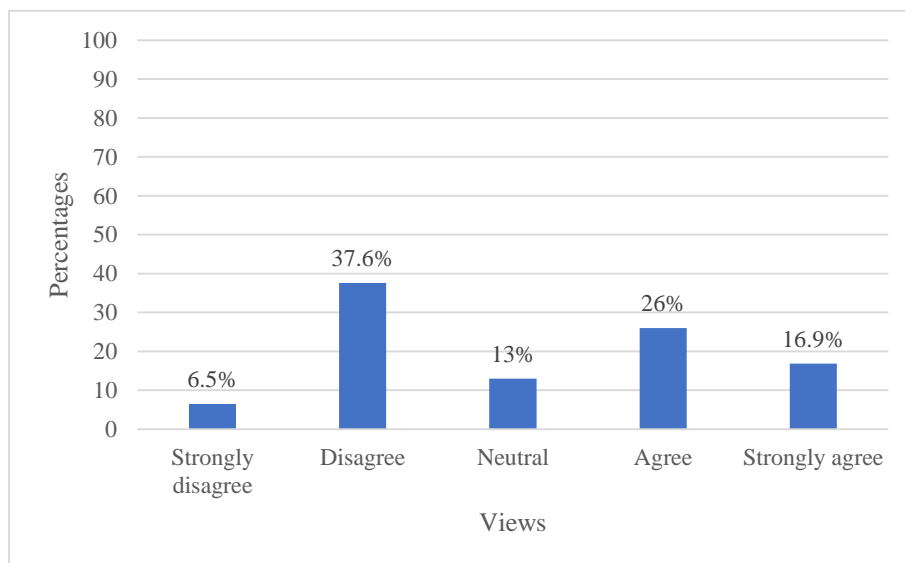


Figure 5. 5. Participants' views on distraction

In following individual interviews and focus groups, participants provided more detailed information about their perceptions of distraction when learning EFL via the

Internet. Findings showed that the issue of distraction varied individually among EFL students.

Computers and mobile phones, for me, are more like a communication or an entertainment tool, instead of a learning tool. I start up the devices for various purposes, playing games, watching movies, listening to music, contacting friends, etc., but not for learning English. (Kent: 18 May 2016)

There are too many interesting things on the Internet. Compared with traditional paper-based learning materials, they are more attractive. How could I focus myself on boring learning, when so many stunning things are around the corner? (Alice: 19 May 2016)

Fancy learning materials take much attention away from learning itself. But I am confident to control my learning attention. (Carl: 11 May 2016)

Students mentioned this newly emerging EFL learning approach did not provide them with a special learning experience, nor essential achievements. It was like other approaches for language learning:

It (online EFL learning) is just one of those options. It is not that special. There are no such things as “the best”. I only adopt the most appropriate learning. (Kent: 18 May 2016)

Some of them indicated their trust in and preferences for traditional learning and teaching approaches:

I prefer to complete all my learning tasks, in a traditional way, before I start learning on the Internet. It only ranks the second in my list. ... I always promise enough time on paper-based learning. ... It is my style, and it has been benefiting me for so many years. (Ben: 11 May 2016)

Traditional language learning outperforms the online one. Online language learning is more like a supplement to the traditional one. At least for university students, paper-based learning is our priority. (Olivia: 11 May 2016)

Eventually, a student concluded:

Online learning is not supposed to replace in-class English learning. It is beneficial. But I do not think it is strong and perfect enough to exclude all other learning approaches, especially the traditional one. (Aaron: 11 May 2016)

5.3 Students' perceptions and practice of learner autonomy

This part reports findings about EFL students' attitudes towards autonomous EFL learning, particularly in the online context, and their exercise of learner autonomy in their online learning practice.

5.3.1 Perceptions of autonomous learning

Participants of the current study were found to learn EFL for various purposes. It is shown in the following Table 5.5:

Table 5. 5

Participants' purposes for English learning

Question	SD	D	N	A	SA	Mean	Std. D
Q5	1/0.6%	14/9.1%	19/12.3%	86/55.9%	34/22.1%	3.90	0.872
Q6	0/0%	6/3.9%	17/11.0%	86/55.9%	45/29.2%	4.10	0.742
Q7	7/4.5%	30/19.5%	75/48.8%	33/21.4%	9/5.8%	3.05	0.910
Q9	0/0%	20/13.0%	32/20.8%	73/47.4%	29/18.8%	3.72	0.918

Q5. I learn English to meet the curriculum requirements.

Q6. I learn English to help me get a good job.

Q7. I learn English because I intend to study overseas in the future.

Q9. I will continue to learn English after graduation.

As can be seen from the study, most EFL students (117, 78%) said that they learned English for fulfilling the requirements in order to graduate. Only 15 students (9.7%) said they were not driven to learn English by the requirements of college curriculum (Q5).

As many as 131 students (85.0%) in this questionnaire agreed or strongly agreed they learned English for an ideal job in the future. It should be also noted that none in

the questionnaire strongly disagreed with this view and the number of people who disagreed with it was only six (3.9%). A mean of 4.10 also demonstrated that Chinese university students shared a common viewpoint on the connection between English language abilities and a good job (Q6). There was still a group of students (42, 27.2%) who claimed that studying overseas in the future would be their plan, which prompted them to develop their English abilities. Most participants (75, 48.7%), however, held a neutral view (Q7). Besides curriculum requirements, EFL students also learned English for personal development in academia or in industry in the future. A majority of these students (102, 66.2%) indicated that they would continue English learning after graduation (Q9).

Since Chinese university EFL students perceived that traditional English courses could not fulfil their learning needs, they sought practices from other sources, among which after-class autonomous learning was a major one. As can be seen in Table 5.6, as many as 110 participants (71.4%) indicated that they would spend extra time on EFL learning after class, while less than 20% of all 154 participants in the study (27, 17.5%) explicitly indicated that they would only keep EFL learning within the class. The high mean of 3.79 also indicated EFL students' willingness for after-class autonomous learning activities (Q8). The finding was also in consistence with their indications in the reversed Question 40 (*Q40: I do not spend extra time studying English after class.*).

Table 5. 6

Participants' views on after-class EFL learning

Question	SD	D	N	A	SA	Mean	Std. D
Q8	5/3.2%	22/14.3%	17/11.4%	67/43.5%	43/27.9%	3.79	1.102
Q40	36/23.4%	71/46.1%	20/13.0%	25/16.2%	2/1.3%	2.26	1.034

Q8. I would like to spend extra time studying English after class.

Q40. I do not spend extra time studying English after class.

Consistent with their indications in the questionnaire, participants expressed their willingness for autonomous language learning after class in the focus groups and interviews. They pointed out that they had employed after-class EFL learning as a routine for their language development in the university. For example:

I usually spend my after-class leisure time on English language learning. (Clark: 12 May 2016)

It is common for me, and my classmates, to invest some time to English learning after class. That is a must for university students in China. (Peter: 19 May 2016)

Relying completely on teachers' lectures and assignments is obviously insufficient.

English is increasingly important in China nowadays. Thus, we students need to spend increasing time on it. (Eric: 12 May 2016)

From their learning experience, participants also mentioned that they perceived after-class EFL learning as an effective way to improve their language abilities:

For me, autonomous language learning is an effective tool. I have to admit that from my personal opinion, it is much better than the in-class one. (Tina: 12 May 2016)

I think autonomous language learning is one of the major learning approaches that could promise essential language development. I could tailor my own autonomous learning, instead of following a teacher's schedules blindly. Sometimes the teacher might even not know me. How could he develop an appropriate one that suits me in this situation? (Chloe: 19 May 2016)

Then Chloe added:

Autonomous learning could provide me with a wide array of digital resources and various solutions, from which I could discover the most needed ones. I do not expect anyone else to know about my own learning, even a qualified teacher. (Chloe: 19 May 2016)

Table 5. 7

Participants' views on their roles in autonomous English learning

Question	SD	D	N	A	SA	Mean	Std. D
Q10	1/0.7%	10/6.5%	43/28.1%	81/52.9%	18/11.8%	3.69	0.790
Q11	3/1.9%	8/5.2%	45/29.2%	82/53.3%	16/10.4%	3.65	0.813
Q12	3/1.9%	18/11.7%	38/24.7%	70/45.5%	25/16.2%	3.57	0.906

Q13	1/0.6%	10/6.5%	39/25.3%	83/54.0 %	21/13.6%	3.80	0.858
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Q10. I select appropriate English learning materials for my own situation.

Q11. I set my English learning goals for my own situation.

Q12. I plan my English learning for my own situation.

Q13. I adjust my plan when necessary.

As indicated in the table above, participants were found to be confident about their abilities in autonomous language learning. Specifically, a total of 99 students (64.7%) agreed or strongly agreed that they were able to find themselves appropriate learning materials, while only 11 students (7.2%) provided explicitly opposed opinions (Q10). Similar results were also seen in other aspects of autonomous learning, including setting aims (Q11), planning learning schedules (Q12), and adjusting learning activities (Q13).

Besides in the questionnaire, participants also stressed their confidence in autonomous EFL learning on the Internet in the focus groups and individual interviews. For example:

It is no big deal. Autonomous EFL learning is always easy and happy. I am quite comfortable with that. I could actually enjoy learning without concerns of other things, such as pressure, test scores, teachers' commands, etc. (Kent: 18 May 2016)

5.3.2 Autonomous learning in a CALL context

EFL students' views on the integration of modern ICTs into autonomous language learning were investigated. It was found that students held positive attitudes towards online autonomous EFL learning (*Q19: I can learn English autonomously via the Internet*). Ninety-eight students (63.6%) agreed or strongly agreed that they could learn English autonomously with the help of the Internet. Only 20 students (around 14%) doubted this point in the questionnaire.

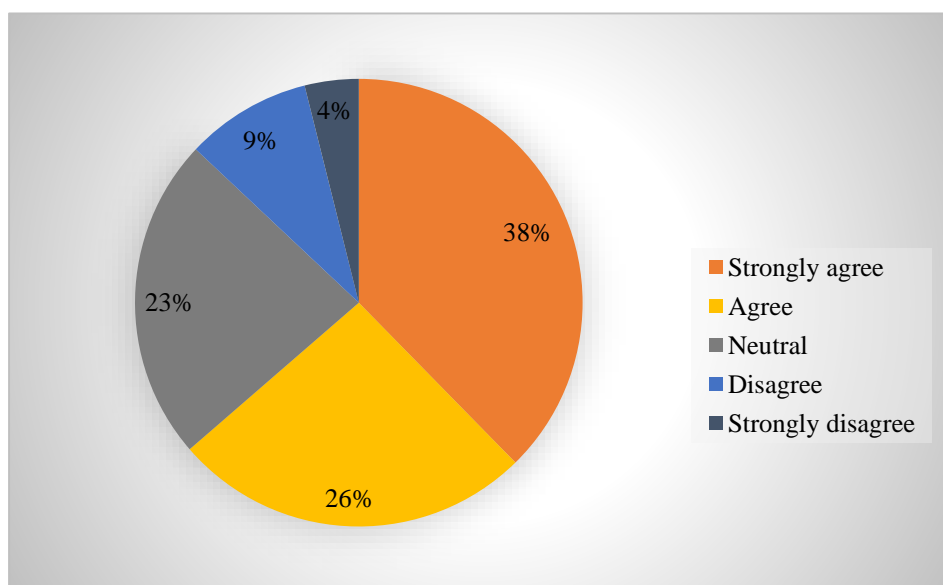


Figure 5. 6. Participants' views on online autonomous EFL learning

They further mentioned some benefits of technology-supported autonomous EFL learning:

I suppose I could customize my learning content on the Internet, where resources are abundant. I am allowed to make learning best suit my current language levels, to precisely serve my personal learning needs. (Betty: 19 May 2016)

I could purposely develop my language abilities through autonomous online learning. (Peter: 19 May 2016)

I believe it is a perfect match of online language learning and autonomous learning.

The Internet is the best context for autonomous English learning. (Aaron: 11 May 2016)

Online autonomous language learning was also believed to encourage EFL students to continue their future development in language knowledge and ability. For example:

I would probably continue autonomous online learning in the future. It is an appropriate approach to continuously develop my language abilities. (Olivia: 11 May 2016)

This approach might bring about my constant development in academia or in industry. I would insist on it after graduation. It may be able to make me a lifelong language learner. (Carl: 11 May 2016)

Learning materials are a focus of the present study. As can be seen from the present study (*Q39: There are not enough online learning resources to support my*

English study), EFL students had strong confidence in online language learning that it could provide them with enough learning resources. Only 11 students (7.1%) opposed this view in the questionnaire. It can be seen in Figure 5.7:

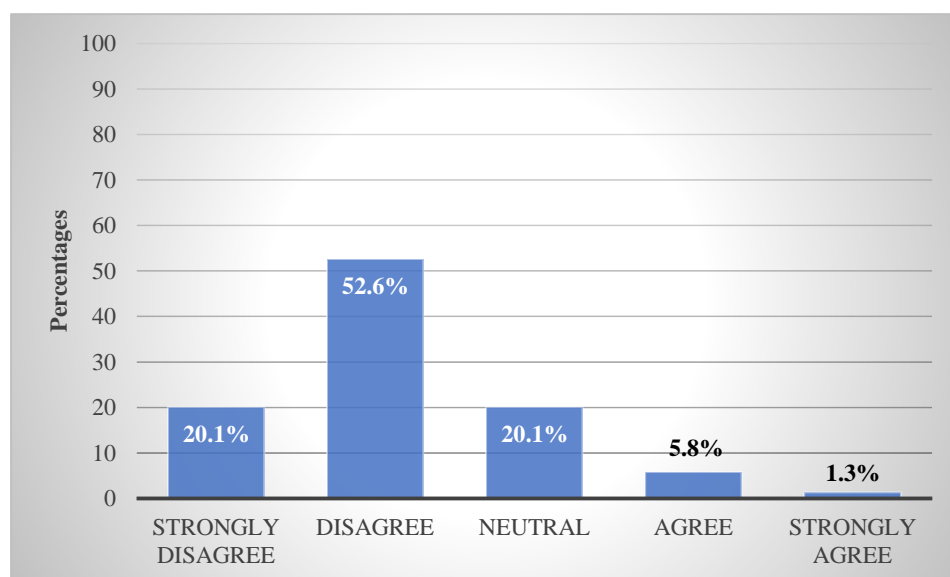


Figure 5. 7. Participants' views on resources in the online EFL learning.

Table 5. 8

Participants' views on materials in online learning

Question	SD	D	N	A	SA	Mean	Std. D
Q31	1/0.7%	9/5.9%	24/15.7%	98/64.0%	21/13.7%	3.84	0.753
Q32	0/0%	17/11.1%	29/19.0%	88/57.5%	19/12.4%	3.71	0.825
Q33	8/5.2%	36/23.4%	35/22.7%	47/30.5%	28/18.2%	3.33	1.172
Q34	42/27.2%	36/23.4%	36/23.4%	24/15.6%	16/10.4%	2.58	1.317

Q31. I would like to employ audio materials when I learn English online.

Q32. I would like to employ video materials when I learn English online.

Q33. I would like to employ games when I learn English online.

Q34. I would like to employ text materials when I learn English online.

For the forms of learning materials, Table 5.8 shows participants' preferences in their online EFL learning. Specifically, participants indicated they could employ various forms of learning resources to serve their autonomous language learning via the Internet. However, their preferences and acceptance of different learning materials were not the same. From the table, it can be seen that audios and videos were the most popular materials for autonomous online language learning, whose means were 3.84 and 3.71 respectively, which were considerably high among Chinese students (Q31 & Q32). Students also had certain acceptance of games in their online EFL learning (Q33). However, it should be noted that the text-based learning materials, which were one of the most common types in their in-class EFL learning, were less accepted in an online environment. Only 40 participants indicated they would employ these materials for their online EFL learning activities (Q34). Students further confirmed their access to various learning materials when learning EFL on the Internet. For example:

Without teachers, the Internet is a major source for me to obtain learning resources.

(Alice: 19 May 2016)

The Internet is a big pool that contains various resources, which can be used for autonomous language learning. There are infinite learning resources on the Internet.

All I need to do is to pick them up. (Emily: 18 May 2016)

Online language materials are more abundant both in types and in quantities than those in the classroom. (Tina: 18 May 2016).

In addition, EFL students were found to be confident about their abilities to discover appropriate materials on the basis of their own language levels and learning situations via the Internet to serve their autonomous language learning:

It could not be easier than finding out learning materials from the Internet. There are so many resources on the Internet. It is so convenient and feasible that I even do not need to spend much time on it. It is just a piece of cake. (Peter: 19 May 2016)

I usually browse English news via the Internet. ... once or twice per day ... That enables me to obtain the first-hand information about the world, as well as to learn authentic language knowledge. (Monica: 18 May 2016)

It is not hard to discover appropriate learning resources for my language learning via the Internet. After all, there are so many choices. With enough information, I can always locate the best ones. (Eric: 18 May 2016)

A student concluded:

The Internet is a mature and reliable source of language learning, particularly for autonomous language learning. With its support, I have the confidence to conduct my own learning without teachers' assignments. (David: 11 May 2016)

5.3.3 Challenges in autonomous learning

While online EFL learning was widely recognized as a beneficial learning approach for Chinese university EFL students' language practice and development, it should not be forgotten that autonomous online EFL learning also presents some challenges for students. Participants named a few:

Online EFL learning is a double-edged sword for me. On the one hand, it contributes to my language development. On the other hand, however, it also leads to some negative influence on my learning. For instance, as the Internet could always provide easy access to answers, I cannot control myself as the answers were on the next page before I work on the tasks. (Flora: 11 May 2016)

Distraction is my concern. Without teachers' interventions and controls, it was easy for me to wander on the Internet, instead of focusing on learning. (Aaron: 11 May 2016)

I agree with that. Distraction comes so easy that I spend a lot of learning time fighting against it in the learning process. ... It is a by-product of autonomous learning. (Ben: 11 May 2016)

Particularly, peer distraction is often in L1. That might be even worse to our English language learning. (Carl: 11 May 2016)

A lack of confidence regarding learning EFL was observed from EFL students, resulting in EFL students preferring to learn alone in autonomous learning.

Sometimes I am afraid of learn English language together with my peers. I am worried that they might laugh at me due to my poor language abilities. (Adam: 12 May 2016)

I am not willing to learning English together with my friends on the Internet. I am not good at English learning, to be honest. I think that my friends might underestimate me as I often make some silly mistakes in learning. (Flora: 11 May 2016)

I am concerned that interaction with peers may distract me from learning. That is the reason why I evade and hide to learn alone. (Tina: 12 May 2016)

Compared with the newly emerging autonomous online learning, however, the study found that the exercise of learner autonomy was limited in the traditional in-class context. A student pointed out in the interviews:

Traditional in-class English learning and teaching, the way it presents and occurs, severely impedes our autonomy in learning. It seems that learning is for teachers

and universities in the classroom, rather than for our own knowledge development.

(Emily: 18 May 2016)

Her peers provided more information about the learner autonomy in the classroom. For example:

Teachers always have control of our learning. They force our engagement. The learning content are boring and focused exclusively on language tests. The most important point is that we cannot change anything in this system. (Chloe: 19 May 2016)

All issues, from learning schedules to learning materials, from time arrangement to practice opportunities, are decided by teachers. They usually follow strict guidelines formulated by the government. I mean, how could they know what I need? They have never asked me! (Carl: 11 May 2016)

The learning materials are so boring and rigid and out-of-date. They can hardly arouse my learning interest. But they are used in the classroom. What am I supposed to do? (Gloria: 18 May 2016)

They leave little student-made decisions on learning related issues. Everything is pre-set. All I can do is to follow their instructions in the classroom. (Alice: 19 May 2016)

The test-oriented learning and teaching methods were also mentioned by EFL students, as one of the major concerns about traditional in-class English learning:

Actually, I think the situation is much better in the university than in the high schools. You guys can recall the memorizing about English learning at that time. It was literally focusing on nothing but language tests. (Julia: 11 May 2016).

No interaction. No cooperation. We always work alone on English learning in the classroom. That is the way our teacher uses to prevent us from copying others. I even doubt the meaning of such learning. Language is supposed to be a tool for communication, I suppose. (Gloria: 18 May 2016)

True. But we spent too much time on preparations for language tests as a routine, instead of developing my language abilities. That is almost the same in the university. We lose too many things in the classroom. (Alice: 19 May 2016).

I have very complex feelings about test-oriented language learning. Admittedly, it improves our language skills and gives us opportunities to receive better education.

However, it is the learning that harms our confidence, and expectations of a foreign language. (Kent: 18 May 2016)

A student concluded:

From my perspective, simply employing so-called online language learning or autonomous language learning does not contribute to revolution in English

learning in Chinese universities. It should be changed from the roots. (Betty: 19
May 2016)

Although many students disliked the test-oriented learning approach, they also admitted autonomous online language learning could make a contribution to their language tests (Q41), and they employed autonomous learning for test preparation (Q23), which can be seen in Table 5.9:

Table 5. 9

Participants' views on online English learning for test purpose

Question	SD	D	N	A	SA	Mean	Std. D
Q23	1/0.7%	12/7.8%	33/21.4%	69/44.8%	39/25.3%	3.87	0.913
Q41	26/16.9%	82/53.3%	37/24%	9/5.8%	0/0%	2.19	0.782

Q23. I employ online learning resources to prepare for language tests.

Q41. Online English learning does not contribute to good scores in examinations.

The data presented above indicated that autonomous online EFL learning was perceived to be helpful for improving students' performance in English tests. More than 70% (108 of 154) participants expressed their belief in online English learning (Q41). And the same number of participants indicated that they employed online learning resources for language test preparation (Q23). A high mean of 3.87 of Question 23 and a low mean of 2.19 of the reversed Question 41 also indicated that students confirmed the contribution of online language learning to test scores.

Although online learning could help their language tests, it was found from the present study that many EFL students preferred a non-test-oriented learning approach for English language development and skill build-up. For example:

I like English learning that is not for test preparation much more than current in-class one. (David: 11 May 2016)

If I had the autonomy, I would definitely choose non-test-oriented EFL learning.

(Clark: 12 May 2016)

Then the student added:

Yes, exactly like in the online learning context. I agree to use the platform for language practice since it is non-test-oriented. (Clark: 12 May 2016)

Other students also provided some information about their experience of these two different learning approaches:

To be honest, it is not a self-initiative act, but a forced one. How could you expect any positive experience and outcomes in that situation? (Monica: 18 May 2016)

Learning language for tests gives me a sense of enormous pressure. (Julia: 11 May 2016)

It should be noted that EFL students' acceptance of non-test-oriented language learning was not unconditional. They pointed out their expectations of the autonomous learning. For example:

I would like language learning as long as it is qualified and informative. It would be better if it could provide some authentic learning materials. (Gloria: 18 May 2016)

Actually, I am ok with both learning approaches. But I wish our traditional language learning could take care of our language ability development from more perspectives, rather than examination skills exclusively. (Chloe: 19 May 2016)

The autonomous online learning employed in this study provided both test-oriented and non-test-oriented types of learning tasks to meet Chinese university EFL students' individualized learning needs. It is presented in Table 5.10:

Table 5. 10

Task numbers in three learning modules ranked by task types

Involved task types	Numbers	Percentage 1	Items	Percentage 2
Vocabulary tasks	12	54.5%	68	64.8%

True or False tasks	4	18.2%	11	10.4%
Speaking	4	18.2%	4	3.8%
Writing	2	9.1%	2	1.9%
Cloze tasks	2	9.1%	20	19.0%
Total	24 (22)*	109.1% (100%)*	105	100%

Note. *Two types of subdivided tasks were employed to constitute one general task in the module of *Australian inventions* (Task C2).

As can be seen from the table, more than half of all tasks made vocabulary the focus. True or False tasks and Cloze tasks, which were considered to be test-oriented and common in various language tests, accounted for less than 30% of all. There were four tasks on speaking and two on writing across the three modules. Only the module of *Welcome to the University of Sydney* had no writing tasks. Students further provided information about their perceptions and experience of these incorporated learning tasks when they learned English on the provided platform in the present study:

I do not like True or False tasks on the platform, nor the Cloze ones. I am too familiar with them. They appear in every language test. I do not like them as they would turn my learning into a language test. I am here to learn language knowledge, to learn foreign culture, not to sit another test. (David: 11 May 2016)

True or False and Cloze tasks are not my type. Why would I use the Internet to sit a language test? I mean, they are designed for formal training, not for casual practices. (Tina: 12 May 2016)

True or False and Cloze tasks would lead to unhappy and unrelaxed learning experiences. Every time I work on them, I feel I am sitting in an examination room.

It is a sign of a language test. That is really uncomfortable. (Betty: 19 May 2016)

These types of learning tasks remind me of my high school teacher. He always found us these tasks for practices. For me, they are symbols of teacher-led language learning in the classroom. (Alice: 19 May 2016)

Students reached an agreement in the focus groups:

I would probably abandon the autonomous learning, if too many test-like tasks were incorporated. (Zoe: 12 May 2016)

Interviews in this study showed that EFL students did not like learning tasks that were much like those in language tests. Their views on different types of learning could be also seen from their descriptions in the interviews. For example:

I do not want to extract information directly from learning content to answer these questions. They are similar with reading comprehension questions in language tests and in College English courses. (Olivia: 11 May 2016)

I am tired of repeated forms of training. I am too familiar with these types. You know, exactly the same with a lecture in the classroom. Teacher provides a topic.

We collect information from the textbook. Then we interact and communicate with each other. (Bob: 12 May 2016)

Using these topics is not like interactive learning, teacher–student lecturing. There are always standard answers to these topics. What I need to do is just to extract them from previous learning. (Ben: 11 May 2016).

As for practical learning content that were directly related with their life and learning experience, EFL students had significantly different attitudes. They indicated their preferences for these topics in the focus groups and individual interviews. For example:

I prefer LM2 and some topics in LM1. They are practically useful and common in daily life. That is the point I learn language. I mean, sooner or later, I need to put learned knowledge into practice in daily life. Why do not I start now? (Susan: 12 May 2016)

It is a mirror to reflect the images of our real world. By learning with these topics, I am no longer limited to the books. As far as I can see, it is enhancing life experience and promoting general knowledge construction. (Eric: 12 May 2016)

Learning with them is useful in daily life. Compared with our textbooks, they are more beneficial to both my language ability build-up and my general knowledge constructions. (Alice: 19 May 2016)

These learning topics arouse an echo in my heart. It is much more comfortable to learn such a familiar and useful topic, than investing time to one that has no relationship with me at all. (Adam: 12 May 2016)

Participants also suggested that they were confident about their learning with these content:

It is possible for me to borrow materials from life experience to accomplish these learning tasks, which builds a firm connection with real life. (David:11 May 2016)

Compared with learning unfamiliar topics, working on these makes me feel comfortable and confident. I am sure that my knowledge could promise my good performance in learning. (Monica: 12 May 2016)

In terms of abstract topics, such as historical and cultural ones, participants indicated their concerns and dislikes in the study:

I do not like LM3 as it provides information about aboriginal culture of Australia.

It seems to be far away from me. I cannot see the point to learn such topics. It is

less useful, as it cannot be used in daily life, nor in language tests. (Chloe:19 May 2016)

Those abstract ones are less meaningful to learn, at least for me. I need practical knowledge that can be put to use, instead of one that turns me into an encyclopedia. (Adam: 12 May 2016)

Then they described their experience with this type of learning content in their autonomous learning practice on the platform:

In practice, I spend very limited time on these topics. I also skipped some difficult ones from time to time. (Eric: 12 May 2016)

Language skill build-up is a key component of EFL learning. It was found from the study that EFL students were confident that online learning could promote their language skill improvement, which can be seen from Table 5.11:

Table 5. 11

Participants' views on skill build-up in the online EFL learning

Question	SD	D	N	A	SA	Mean	Std. D
Q27	0/0%	1/0.6%	19/12.3%	104/67.4%	30/19.5%	4.06	0.586
Q28	2/1.3%	72/46.7%	22/14.3%	46/29.9%	12/7.8%	2.96	1.066
Q29	0/0%	23/15.0%	52/34.0%	66/43.2%	12/7.8%	3.44	0.842
Q30	1/0.6%	26/16.9%	65/42.2%	56/36.4%	6/3.9%	3.26	0.807

Q27. I can improve my listening skill through multimedia and online EFL learning.

Q28. I can improve my speaking skill through multimedia and online EFL learning.

Q29. I can improve my reading skill through multimedia and online EFL learning.

Q30. I can improve my writing skill through multimedia and online EFL learning.

Four macro language skills, listening and reading in particular, were believed to benefit from online learning. As can be seen from the table above, only one student (0.6%) disagreed with the view that listening skill could be practiced through online EFL learning. A high mean of 4.06 also indicated that there was widespread belief in it among Chinese university students (Q27). A similar statistic was obtained in reading skill (Q29). More than a half of all participants of this questionnaire (78, 52.0%) agreed or strongly agreed that online EFL learning could improve students' reading skill. Speaking and writing skills were not thought to be significantly improved as much as the other two, as indicated in Question 28 and 30. The means for them were 2.96 and 3.26 respectively. Only around 37.7% of participants (68 of 154) believed or firmly believed their speaking skill could be improved via the Internet, while the number was 40.3% (62 of 154) for writing skill. Students described their perceptions of and engagement in learning to practice their language skills interviews as well. For example:

I am tired of reading practices by using traditional materials, such as textbooks and dictionaries. They are old-fashioned and have many drawbacks. I prefer some

modern tools for learning, which bring about varied new forms of learning resources. (Roy: 18 May 2016)

I always skip speaking practices when learning on the Internet. That is because no one would interact with me. Do not you feel a little weird to speak English to yourself? (Julia: 11 May 2016)

Me too. I spend very limited time on speaking tasks. Without peers' involvement is one reason. Another is that no one would provide instructions for me. I cannot evaluate my performance in autonomous online learning. (Lydia: 11 May 2016)

I do not practice speaking on the platform, nor find myself additional practices for speaking. Due to a lack of formal training on speaking English, I do not know how to improve my speaking skill by myself. I am suffering a lack of training in speaking. (Betty: 19 May 2016)

I even skipped all writing tasks on the platform. No one would read my writing. What is the point to spend time on it? (Kent: 18 May 2016)

In the interviews, EFL students also provided some reasons for their preferences of learning for promoting a certain language skill in the learning practice:

I prefer learning tasks that could provide me with noticeable improvement in language abilities. (Eric: 12 May 2016)

Speaking practices are slow in promoting my language development. They are quite demanding in time, while the improvement is always unobvious. (Bob: 12 May 2016)

I want my endeavours to get instant payback in language learning. Obviously, writing practices are not in that type. (Susan: 12 May 2016)

This provided some insights of EFL students' perceptions of and engagement in autonomous online language learning.

5.4 Interactive EFL learning

5.4.1 Perceptions of and engagement in interactive learning

Interactive language learning is a common approach for language development among Chinese university students. This study investigated participants' perceptions and employment of this learning approach, as well as some obstacles and challenges they faced when conducting interactive EFL learning both in the classroom and on the Internet.

Table 5. 12

Participants' views on interaction via the Internet in English learning

Question	SD	D	N	A	SA	Mean	Std. D
Q21	2/1.3%	15/9.8%	26/17.0%	74/48.4%	36/23.5%	3.83	0.944
Q26	0/0%	10/6.5%	27/17.6%	94/61.3%	22/14.4%	3.84	0.747

Q21. I like learning English together with my friends/classmates.

Q26. Computers and the Internet make the interaction easier between peer learners when learning English.

As indicated in Table 5.12, students were interested in learning English together with their peers and friends. Only 17 students (11.1%) preferred to study English alone (Q21). When asked if they believed computers and the Internet could make interactions easier (Q26), participants of this questionnaire provided positive answers. As many as 116 students (75.8%) agreed or strongly agreed with it. A mean of 3.84 also indicated that students had strong confidence in technologies. EFL students provided more detailed information about their perceptions of technology-supported interactive learning in the interviews as well. For example:

It is a critical factor for autonomous learning at any time from anywhere. Online learning could achieve that. If I needed to stick to a strict plan of learning time and environment for learning, I might probably abandon it. (Zoe: 12 May 2016).

The Internet enables me to be exposed to opportunities to use the target language in interactive learning. (Roy: 18 May 2016)

Besides accessibility, online interactive learning was also considered to create a friendly learning environment for EFL students. As students indicated:

Online interactive language learning provides me with a friendly environment.

That encourages my active engagement. (Monica: 12 May 2016)

I feel easy and relaxed to interact with peers via the Internet, as I do not need to face them (Betty: 19 May 2016)

The Internet protects me, so that I could present my opinions boldly. (Flora: 11 May 2016)

Participants mentioned the incorporation of learner autonomy into interactive learning, particularly in an online context. It was considered to improve their learning experience:

I prefer interactive learning that is controlled and hosted by myself, instead of teacher-led ones. Only in this way can I invest all of myself into learning activities.

(Bob: 12 May 2016)

Many students stressed the significance of interaction in language development. It could be seen from this study that autonomous interactive language learning was accepted as a beneficial learning approach. Students incorporated their learning purposes with the employment of interactive learning:

Interactive learning is a reflection of the nature of language. Language is a tool for communication between people, instead of a tool for language tests. (Eric: 12 May 2016)

It is important to put language to practical use, rather than using it for assigned purposes exclusively, such as language tests. (Emily: 18 May 2016).

Due to the wide acceptance of benefits of online interactive language learning among participants in the study, their average engagement (exemplified by the number of students' responses) in interactive activities on the platform experienced constant increases, which can be seen in the following table and figure.

Table 5. 13

Participants' engagement in interactive learning

LM	Participants	Participation rate	Responses	Avg. responses
LM1	18	60.0%	107	5.94
LM2	18	60.0%	113	6.28
LM3	10	33.3%	107	10.7
Total	46	51.1%	327	7.11

As can be seen from the table, in all three learning modules, more than half of all invited participants (46 of 90, 51.1%) engaged in the interactive learning activities, contributing a total of 327 records of peer interactions and teacher–student interactions in the study. Student participations were significantly more active in LM1

and LM2, while only 33.3% of them engaged in LM3. Their responses kept steady along the whole learning process, while their average responses experienced constant increase. It is illustrated in the Figure 5.8.

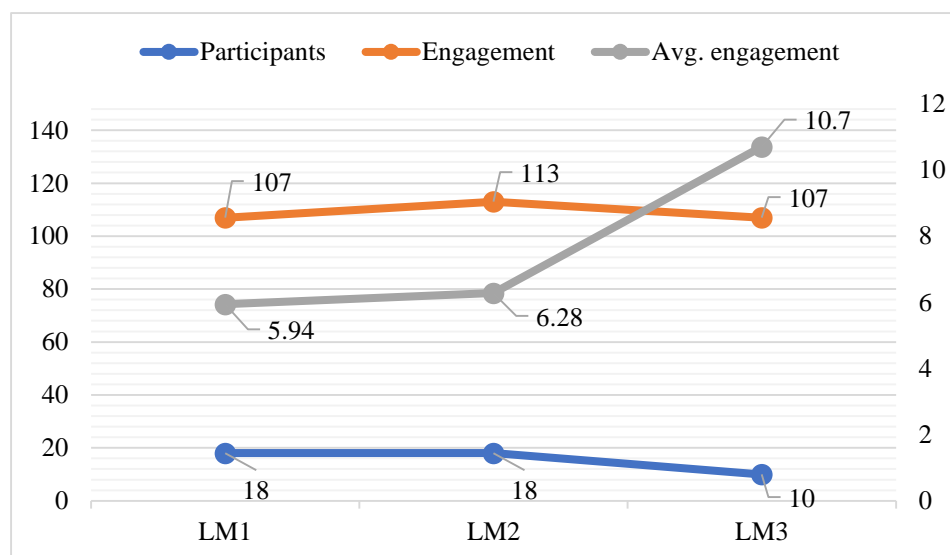


Figure 5. 8. Trend of participants' engagement in three LMs

As can be seen from the table and figure above, the numbers of students engaged in the interactive learning activities were steady in LM1 and LM2 at 18. It slightly dropped to 10 in LM3. A total of 107 responses from students were recorded in the learning process in LM1 and LM3, while the number slightly increased to 113 in LM2. Participants' average responses experienced constant increases. The figure in LM1 was 5.94, indicating that each participant of the interactive activities contributed 5.94 responses on average, including peer interactions and teacher–student interactions; then 6.28 in LM2 and 10.7 in LM3. The figure in LM3 was approximately 70.4% more than the number at the beginning of the study.

5.4.2 Teacher-led interaction and peer interaction

Two types of interaction were seen in the study: teacher-led interactions and peer–peer interactions. It was found that EFL students’ engagement and activities in these two types of interactive learning activities were varied along the three learning modules, which was illustrated in the following figure:

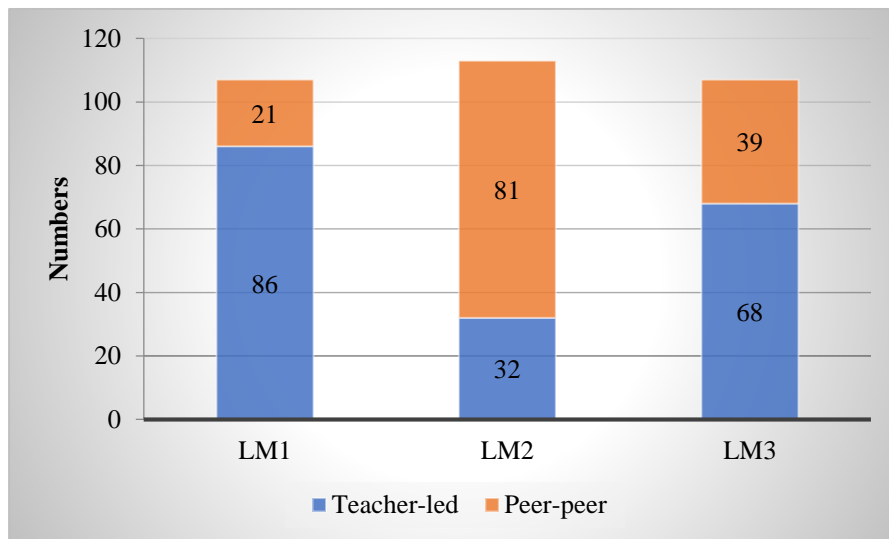


Figure 5. 9. Participants’ engagement in two types of interaction

It can be found from the figure above that the components of EFL students’ activities in interactive learning were significantly different in three learning modules. In LM1, a majority of students’ responses were their discussions or direct answers to teacher-raised questions for interactive English learning (86, 80.4%), while only 21 peer interactions were recorded, occupying 19.6%. In LM2 and LM3, the proportions of students’ engagement in peer–peer interactions were significantly increased, particularly in LM2. Peer–peer interactions were more than 70% of all their

engagement in interactive learning. Students were further investigated about their interactive learning in the interviews. Many provided their views on their engagement in the learning. For example:

Online interactive learning provided me with more opportunities to state my personal views. In the classroom, I usually have only one time for a presentation in a week's learning. Here on the Internet, there is no limit. I could engage in as many interactive learning activities as I wish. (Chloe: 19 May 2016)

Online learning provides me with an affordable means to engage in interactive activities. Compared with traditional ways, it is much more acceptable for students, particularly for people like me, who are not English major students. I believe we just want to improve our language abilities in a casual and convenient way, when we have some spare time. (David: 11 May 2016)

It is effective and efficient to interact with peers for language learning via the Internet. That is also the way I have been using it since enrolled in the university (Emily: 18 May 2016)

Students also described their experience and perceptions of online interactive learning on the platform. For example:

It is interesting, engaging, and fruitful. It gives me a feeling that I could not have in my individual learning. Interacting with peers is new to me, particularly via the Internet. (Julia: 11 May 2016)

5.4.3 Resources in interactive learning

Regarding the topics for interactive learning, three different types were provided on this platform, which were about EFL students' personal views, their life and learning experience, and information that could be directly extracted from the learning content in the modules. As found from their learning practice, EFL students' employment of these three types of topics for interaction were not equal. Statistics are presented in the table below:

Table 5. 14

Participants' engagement in interaction regarding different topics

Topic types	Topics	Engagement times	Proportion	Ratio
Personal views	7	192	58.7%	27.43
Living and study experience	5	102	31.2%	20.4
Information from learning	5	33	10.1%	6.6
Total	17	327	100%	19.24

It could be seen from the table above that interactive topics, which enabled EFL students to share ideas and exchange their personal views, were preferred by them, as the most frequently adopted topics for interaction. A total of 192 responses (around

58.7%) from participants were recorded, involving seven interactive topics. The ratio of responses to topics was as high as 27.43, indicating its popularity among students; while information that could be directly obtained via their individual learning on the platform was less preferred. As shown in the table above, only 33 responses to five topics in this type were provided, accounting approximately 10% of all interaction among EFL students. The ratio was only 6.6, far below the average one of 19.24.

In interviews, students mentioned that familiarity of learning content and procedures was a concern of EFL students to engage in interactive learning, as suggested by participants in this study:

It is very comfortable to interact with peers by using these familiar topics. We always have many ideas to share. (Kent: 18 May 2016)

Those (topics) in LM3 are abstract, alien, and unfamiliar. They impose a challenge to my interactions. (Julia: 11 May 2016)

Sometimes, I cannot provide feedback to peers' presentations since I do not know what they are talking about. This is particularly common in LM3. (Bob: 12 May 2016)

Participants also indicated the importance of example and prior familiarity of procedures of interactive learning:

I would be more willing to engage in interactions if I could know how these activities would be operated. (Aaron: 11 May 2016)

Me too. I would like to be shown a complete round of peer interactions, before I step in. (Peter: 19 May 2016)

Interactive learning was employed to fulfil EFL students' various needs, including both the social need and the academic goals. They employed interactive learning as an opportunity to display their achievements in EFL learning to others. For example:

It is a good opportunity to display what I have prepared for presentation in public. (Susan: 12 May 2016)

I am quite proud, if I could complete a task that others could not. (Emily: 18 May 2016)

It is important for me to let others know that I am good at learning. So, I join in interactive learning. (Bob: 12 May 2016).

5.4.4 Challenges in interactive learning

Although autonomous interactive learning was accepted by students, some of them still indicated they would not participate in it. It was found to result from some obstacles and challenges they faced in interactive learning, which they might not be

able to solve at the current stage. They provided detailed explanations of their choices:

I am not interested in interactive language learning. I learn English for academic purposes, which means all I need to care about is language tests. As interactive learning contributes little to that, I prefer to spend time on other practices. (Adam: 11 May 2016)

I am not involved in interactive learning activities since it usually proved to be demanding in time with less reward. (Roy: 18 May 2016)

On the one hand, familiarity makes me confident and willing to engage in, while on the other hand, it brings about nothing but boring learning experience. I might not engage in interactive learning. (Kent: 18 May 2016)

Students indicated their withdrawal from interaction with peers in English language due to a lack of confidence in their current language levels:

I might not have the qualifications to interact with peers in English language fluently. After a careful consideration of my current learning situations, I decide not to engage in interactive learning. I guess that is not a big mistake though. (Peter: 19 May 2016)

I would feel sorry if I fail to provide valuable feedback to peers' presentations in interactive learning. That feeling discourages my engagement. (Eric: 12 May 2016)

In LM3, I am gradually aware that I am able to do interactive language learning. I begin to participate in activities with my peers. (Tina: 12 May 2016)

L1 mediation in interactive learning was common, as EFL students indicated. Students perceived that it might impede their learning performance and effectiveness of language practice. In this study, many students provided negative comments on L1 mediation in interactive learning, while some of them took it as a factor that prevented their engagement in learning activities. For example:

I often find myself to start using L1 unintentionally in interactions. That might be no good for English learning. (David: 11 May 2016)

Admittedly, due to my language level limits, I often employ L1 to organize words and sentences and then translate them into English for interaction. I know that might harm the effectiveness of practices, but that is my only way to ensure my presentations. (Olivia 11 May 2016)

Another concern of EFL students that limited their engagement in interactive learning was found to be foreign language anxiety:

Interacting with classmates in English language is really frustrating. (Kent: 18 May 2016)

I feel anxious about myself to use English language for expressing ideas in public.

That further leads to my tension and severely impedes my willingness to learn and use English language. (Bob: 12 May 2016)

I can feel enormous pressures from speaking English in front of my classmates.

That makes me too nervous to take an active part in interactive English learning.

(Alice: 19 May 2016)

Students indicated that the concept of face, which was traditionally a significant concept in Chinese culture, might impose some influence on their interactive language learning. For example:

For me, making mistakes, particularly stupid mistakes, in language learning, equals losing face. That is a very serious situation since my friends would laugh at my poor language abilities. (Susan: 12 May 2016)

I am too shy to express personal ideas autonomously even on the Internet, where my identity is covered. Making mistakes in public would definitely hurt my face.

(Olivia: 11 May 2016)

Besides these challenges, it was also observed from the study that EFL students in the online interactive learning were deeply influenced by their traditional learning experience. For example:

I find myself to be very sensitive to mistakes in others' presentations, especially grammatical mistakes. (Lydia: 11 May 2016)

Similar with Lydia, I am very careful about peers' selection of words in interactive learning. (Carl: 11 May 2016)

Although I do exactly the same with you in interactive learning, I feel that is not appropriate. It would be less meaningful for language development if we treat interactive learning that way. (Eric: 12 May 2016)

There were some other concerns of EFL students when engaging in interactive language learning. They might impose some influence on their learning performance, experience, and outcomes in interactive English learning, which were investigated in the present study. Imitation was reported to be a frequently used strategy in interactive learning among EFL students. They pointed out the importance of imitation and modelling in language learning in the study. As students described their learning experience in the study:

I prefer to wait for peers' trials when I face some unfamiliar practices. Then I could follow their examples and better mine to achieve a satisfying outcome.

(Aaron: 11 May 2016)

To be honest, I am afraid of making mistakes in language learning. So I follow examples and imitate peers in learning activities, which would ensure good performance. (Betty: 19 May 2016)

Further, Betty added some details of her imitation in interactive learning, for suggesting which was different from copying others' learning:

I need to clarify that I imitate peers in interactive learning, but I do not copy their presentations or responses in the process. I just examine some general issues, like what they do for the first step, what they do when facing some common problems, etc. I do not copy. (Betty: 19 May 2016)

Anonymity is a feature of online interactive language learning. In teacher-led interaction, it seemed that anonymity did not impose significant influence on their learning. As students indicated:

I do not care about anonymity when interacting with teachers for language learning. I even did not notice I was using a pseudonym in these interactions. (Bob: 12 May 2016)

It was not a concern to reveal my name to my teachers or to my classmates in teacher-led discussions, like we did in LM2. It is acceptable for me. Discussing with teachers is not a secret for all students thus, I do not think there is a need to cover my identity. (Adam: 12 May 2016)

It is ok for me to let people know my identity in a teacher-led discussion. That is because the learning is under the command of an authority. I just follow orders.

Even if there were something wrong, that would not be my mistake. (David: 11 May 2016)

While in peer interaction, EFL students had different attitudes towards pseudonyms. They clearly announced:

With the protection of a pseudonym, I could provide critical comments on peers' presentations without many concerns. I think it is necessary for peer interactions in language learning (Flora: 11 May 2016)

It is really hurting peers' faces to point out their mistakes in public. Without a pseudonym, I would probably keep silent all the way. (Lydia: 11 May 2016)

In their traditional learning context, EFL students indicated that interactive learning activities had been integrated into the classroom. As indicated by them, various types of learning activities were employed in their English courses (Q14). The most mentioned four types of activities were: group discussion (29.1%), solo presentation (27.8%), team-work presentation (10%), and role play (8.6%). Some other activities were also mentioned by a few students, which can be seen from the figure below:

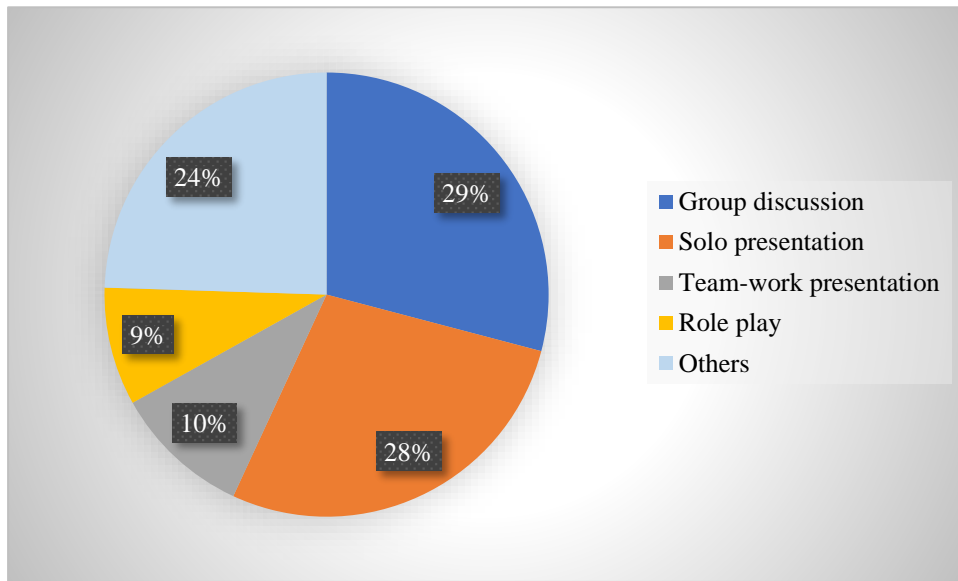


Figure 5. 10. Learning activities in English classes

From the figure above, it was found that interactive learning activities (group discussion, team-work presentation, and role play) accounted for nearly a half (47.7%) of all learning activities in the classroom. An abundant amount of interactive learning activities was provided to EFL students' in-class learning. However, students indicated their dislike of these interactive activities. For example:

In-class interactive learning is not student-centred. It is my English teacher who organizes, assigns and controls the learning and the process. (Adam: 12 May 2016)

Many interactive activities ignore my will. I have to engage in them, even when I do not want to. (Alice: 19 May 2016)

Interactive activities address no meaningful issues, but cliché The topics are all the same for years. ... I do not think they are helpful for our language development, nor for enhancement of our knowledge about the world. (David: 11 May 2016)

In the classroom, nearly half of participants (70, 45.5%) conceded that they did not engage in interaction with teachers unless they were required to do so, while only 10 of them volunteered to interact with teachers, accounting for only 6.5% of all. Students' choices are shown in the figure below (*Q15: When you are in an English class, you _____*):

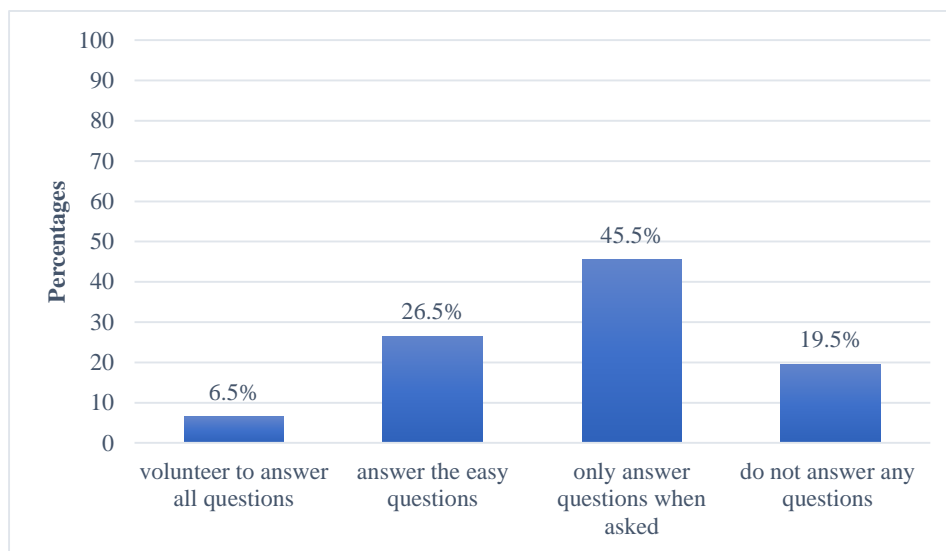


Figure 5. 11. Participants' interaction with teachers in the classroom

Students were also found to be less active in interaction with peers in the classroom. As can be seen from Figure 5.12 (*Q16: When the teacher asks you to have a group discussion in an English class, you _____*), most participants (66, 42.9%) attended in interaction but kept silent for most of the time. There were another 36 participants who did not involve themselves in any group discussion in the classroom, accounting for 23.4% of all.

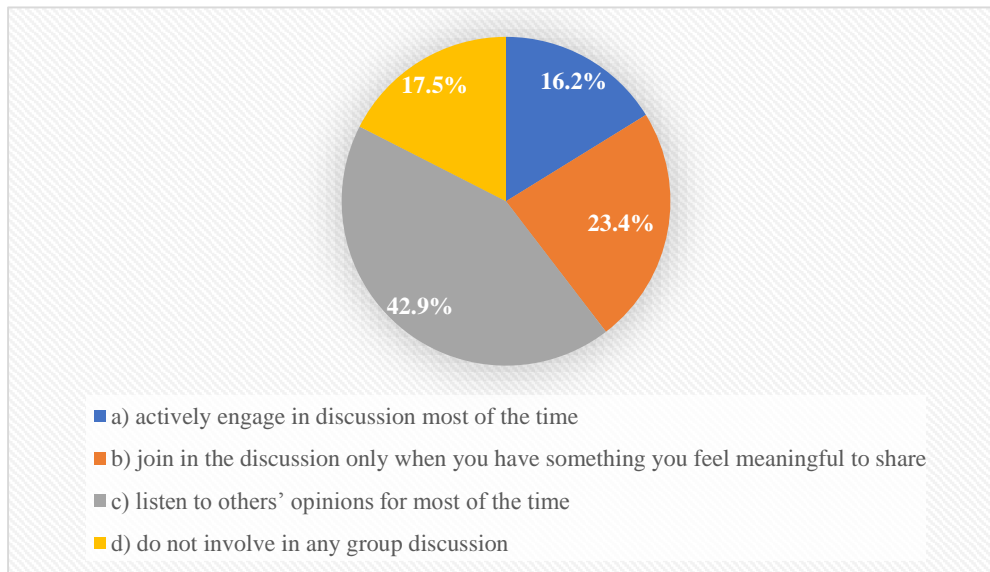


Figure 5. 12. Participants' engagement in group discussions in the classroom

Participants also pointed out that opportunities for students to engage in interactive learning activities were not abundant in the classroom, leaving limited time for them to practice their communicative skills, as well as language abilities:

It is not easy for me to be actually involved in interactive learning activities in the classroom. There are not enough opportunities in the class. Considering that I am not interested in every topic, it might be difficult to find an appropriate one to engage in. (Susan: 12 May 2016)

I usually find myself attending rather than engaging in learning. I mean, I would be there as a member to engage in the activities. But I am not a contributing member.

I just sit there without any presentations. (Clark: 12 May 2016)

Pressure from teachers discourages me to engage in interactive learning in the classroom. I am worried that my performance might make teachers underestimate me and mark a low score in the examinations. (Flora: 11 May 2016))

Foreign language anxiety was also an impeding factor that caused trouble to EFL students' engagement in interactive learning in the classroom, where they had to use English language in public:

The experience is unpleasant to present my ideas in front of all my classmates, particularly in English language. They would laugh at my pronunciation. (Peter: 19 May 2016)

Sometimes I feel bored to interact with my classmates in English. Not everyone is interested in that. But I have to pretend to be attracted by their boring presentations.

That is not comfortable. (Carl: 11 May 2016)

Interactive learning activities can be incorporated with both traditional EFL learning and teaching approach, and the newly emerging online one. However, it does not necessarily lead to students' acceptance, nor satisfying learning results.

5.5 EFL learning in ZPD

5.5.1 Perceptions of learning resources in ZPD

ZPD provides students with a reference to frame learning resources with appropriate difficulty into their autonomous learning, leading to positive learning experiences, as well as good outcomes. EFL students were found to be confident with their abilities to locate their individual ZPD, according to which they could find learning materials that suited their current language levels. Modern ICTs were also believed to enhance their confidence regarding learning materials. For example:

I could always find myself learning materials from the Internet with appropriate difficulties. They suit my individual learning situation. (David: 11 May 2016)

Online learning content are not like our traditional ones, which ignore students' different language levels and education background, and are same for all students.

(Aaron: 11 May 2016)

With the integration of modern ICTs into EFL learning and teaching, students are able to locate their individual ZPD, and to find appropriate materials to serve their own learning in an autonomous context:

The Internet creates a learning platform where equal opportunities for accessing learning are provided to all students. (Susan: 12 May 2016)

Learning English with qualified resources is no longer a privilege for a small group of students. Online learning makes it a right for all. (Kent: 18 May 2016)

Otherwise, learning materials with inappropriate difficulties were not effective for EFL students' language learning. Even worse, they might prevent students from engaging in autonomous learning activities. As students described:

I would learn nothing meaningful, as some of the learning content on the Internet were far beyond my current language levels. It would be meaningless to learn with them for my language development. (Tina: 12 May 2016)

I was quite comfortable to learn English in LM1 and LM2 on the platform. I also enjoyed essential improvement of my language abilities and knowledge in the first two modules. However, learning LM3 was full of obstacles. (Zoe: 12 May 2016)

Personally speaking, I prefer learning content that are not too difficult, nor too easy. I strongly believe only using these materials could improve my language abilities, particularly in an autonomous context. (David: 11 May 2016)

Inappropriate learning materials that lie outside of students' ZPDs were often employed in EFL students' traditional in-class learning, resulting in their low motivation for language learning:

I do not like materials used in the English courses. They are designed for all university students. However, designers seem to forget that students usually have varied language levels. (Alice: 19 May 2016)

Yes, indeed. They are either too difficult or too easy for me. It can hardly arouse my learning interest. (Julia: 11 May 2016)

English course often ignores our individualized language learning needs. ... It always requires me to practice my reading skills instead of my speaking, while for my personal situation, the latter is the one that needs more training. (Lydia: 11 May 2016)

5.5.2 Multimedia resources in ZPD

Among various types of learning materials, multimedia was found to be a preferred one. EFL students displayed their positive perceptions of multimedia resources for autonomous EFL learning, which is shown in Table 5.15:

Table 5. 15

Participants' views on multimedia learning materials

Question	SD	D	N	A	SA	Mean	Std. D
Q35	2/1.3%	3/2.0%	26/17.0%	97/63.4%	25/16.3%	3.92	0.725
Q36	0/0%	3/2.0%	24/15.7%	98/64.0%	28/18.3%	3.99	0.649

Q35. Multimedia can effectively improve my language abilities and knowledge.

Q36. I prefer multimedia resources for EFL language learning.

As can be seen from the table above, only very few participants in the study (3.3%) opposed the idea that multimedia learning materials could be effective tools for language learning (Q35), while even fewer (3 of 153, 2.0%) were not in favour of

this type of learning materials (Q36). In interviews, participants indicated they liked multimedia resources for their language development as well:

Multimedia learning materials, such as videos, audios, and mini games, are helpful and effective for language development. From my experience, they could essentially assist my English learning. (Gloria: 18 May 2016)

I use multimedia materials for learning new English vocabulary. I find it is a more efficient way for me to learn the spelling and the usage of these new words. At least for me, multimedia resources are helpful for language development. (Bob: 12 May 2016)

I use multimedia resources, particularly those authentic videos, to create learning to make myself more immersive in an English-speaking context. (Chloe: 19 May 2016)

When learning on the platform for English language development, participants reported to make frequent use of multimedia resources, particularly videos and audios, for language practices.

I usually watched the videos two or three times on the platform before I worked on those learning tasks. The first reason was that it promised my understanding and comprehension of the content in the videos. The second reason was that these multimedia resources were informative. Even if I did not work on learning tasks, I

would enjoy those videos. It was not only for accomplishment of learning tasks, but also for other learning, such as imitating native-speakers' pronunciations. (Zoe: 12 May 2016)

Besides language knowledge, I also make multimedia resources multi-functions. For example, I use them to know about the world, to virtually interact with native English speakers, to get acquainted with other cultures, and so on. (Susan: 12 May 2016)

I feel it is less difficult to learn a language with multimedia materials. They are full of vivid pictures and authentic audios, which provide a direct sense of a certain language. It is a benefit that other types of materials cannot provide. (Aaron: 11 May 2016)

One student pointed out the status of multimedia resources in his autonomous online language learning practice:

I believe these multimedia resources are the focus of my learning. All other materials, such as tasks, answers, and extended materials, are provided to serve our learning with these multimedia ones. They are the centre of the learning on this platform. (Roy: 18 May 2016)

Multimedia learning resources act as a good carrier for updated learning content. Participants confirmed the effectiveness of new and updated multimedia resources for

language learning, and stressed the importance of incorporating them into their autonomous online learning:

The Internet always provides me with cutting-edge content, as they are updated regularly. It is even possible for me to obtain information about things that happened yesterday, making my learning more practically useful. This cannot be easily realized in the classroom. They do not update my textbooks for years. (Clark: 12 May 2016)

Yes. Some stories in my textbooks are even older than me. How can I expect to develop my language abilities by using these materials? (Monica: 12 May 2016)

It is a good way to expand my horizons by using new and updated learning materials for language learning. (Zoe: 12 May 2016)

EFL students were found to be interested to seek and employ authentic materials for their autonomous language learning. For example:

I would like to employ learning content that are produced, presented, and originally provided for English-speaking students, including movies, TV series, music, games, novels, etc. They all provide me with satisfying learning experiences and outcomes. (Flora: 11 May 2016)

I prefer learning materials that are currently used by English native speakers, instead of being deliberately designed for speakers of other languages. (Peter: 19 May 2016)

Authentic materials are easily obtained via the Internet, which is one of the main sources. (Susan: 12 May 2016)

In the past when we had to learn English in the classroom, the traditional paper-based learning limited my accesses to authentic resources. (Betty: 19 May 2016)

In the online learning practice, students described their employment and perceptions of authentic materials for language learning on the platform. For example:

I prefer to employ those authentic materials on the platform than those pedagogical ones. I have the belief that they could better serve my language development. They do not only contain language knowledge, as their traditional counterparts do, but also provide me more information about the world. (Clark: 12 May 2016)

I agree with Clark. They open a window for us to see what life is like in other countries. (Susan: 12 May 2016)

For learning with authentic multimedia materials in an online context, EFL students developed corresponding learning strategies to cope with the new type of learning resources, based on their own understanding. For example:

I use a different way to learn English language with multimedia learning materials from that I am required to use in the classroom. I believe that that is appropriate since the learning materials are different as well. (Monica: 12 May 2016)

For example, I was used to repeatedly memorizing a new word, from its spelling, its meaning, to its usages, etc. Now when learning with authentic multimedia, I prefer to put it into the real context. That helps me to memorize the word from a totally different perspective. (Gloria: 18 May 2016)

They also noticed the importance of learner autonomy in the process of their learning with multimedia resources. As a student explained:

Only in the online learning can I select the best suited ways for learning with different types of materials. In the classroom, my teacher would get all things ready for me, including materials and learning methods. (Eric: 12 May 2016)

In contrast with their attitudes towards multimedia materials, EFL students in the current study displayed limited interest in traditional forms of learning materials when learning on the platform. Students described their experience in online learning:

I just took a quick look at texts on the platform. (Chloe: 19 May 2016)

I am reluctant to use texts for language learning on the Internet. Reading long texts on the screen is not that comfortable. And why should I have to do that on the Internet? If I need to read texts, I prefer a paper-based book. (Emily: 18 May 2016)

For me, those materials (texts) are only supplements to multimedia ones. If I have obtained enough information from videos and audios, I might not use texts for further learning. (Betty: 19 May 2016)

Furthermore, they were also found to prefer different learning materials than those they were familiar with.

I would like to use materials that I have not seen before for language learning on the Internet. I wish them to be different in form, in content, in organization, and so on. As long as they are different and create extraordinary experiences for my learning, they would fulfil my needs. (Lydia: 11 May 2016)

Learning tasks were found to be popular among EFL students' online language learning. Many participants reported giving priority to learning tasks in their online learning practice. For example:

All learning materials are supposed to serve learning tasks. I use them for and only for one purpose: to correctly solve all tasks provided on the platform. (Eric: 12 May 2016)

Tasks are the most important indicator of my learning performance. If I worked out all tasks correctly, that would mean I had acquired something meaningful. (Alice: 19 May 2016)

Incorporated answers and references could directly help accomplish learning tasks. Thus, they were my most used scaffolding when learning on the platform. (Peter: 19 May 2016)

5.5.3 ZPD and self-evaluation

EFL students employed various accessible resources on the platform for self-evaluation, which was considered to be an important task for them to know about themselves and their current language learning:

I used scaffolding to check my answers to the provided tasks. If I were doing well in these tasks, I would move to the next session. If I failed some, I would turn back to review and revise them. (Carl: 11 May 2016)

Occasional self-evaluation is important to me, since I need to always have a picture of my learning performance. Learning tasks, together with scaffolding answers, are teachers in autonomous learning. (Roy: 18 May 2016)

Self-evaluation helps me understand my current language levels, as well as enables me to well plan my future learning. (Flora: 11 May 2016)

EFL students mentioned some challenges they faced in autonomous online language learning. Discovering appropriate materials to serve their learning in the range of ZPD was not easy for them, while some resources might also distract their attention. For example:

It is a challenge for me to discover appropriate materials from a big resource pool.

(Clark: 12 May 2016)

There are many mistakes in learning materials on the Internet. No one would be responsible for that. What we students need to do is to figure them out all by ourselves. That is not easy for everyone. (Emily: 18 May 2016)

True. Unreliable, or even mistaken materials for language practices are common on the Internet. It is extremely critical to figure them out before putting them into learning activities. (Alice: 19 May 2016)

I agree. There are over-abundant learning materials on the Internet, and it might be demanding for us to work out those essentially beneficial ones. (Flora: 11 May 2016)

I am usually confused about some so-called learning materials on the Internet. It seems that there might be some mistakes in them. However, I could not be very sure about that. (David: 11 May 2016)

Distraction was another challenge faced by EFL students in their autonomous online language learning. They often found employing multimedia resources for language learning made it difficult to focus on learning. As students described:

I usually find myself wandering in this virtual world when using multimedia resources for language learning, as they offer overwhelming information. It is not easy for me to focus on learning for a long time. (Eric: 12 May 2016)

My attention is usually drawn by other things rather than learning when using multimedia resources, such as the music and colourful images. (Alice: 19 May 2016)

Data regarding EFL learning in ZPD are presented in this part. They help reveal Chinese university EFL students' perceptions and employment of learning English online for the development of their language abilities and knowledge.

5.6 Students' perceptions and uses of scaffolding

5.6.1 Scaffolding in online EFL learning

Scaffolding was preferred and relied on by participants of this study in their autonomous language learning. As data showed, it played a role in facilitating EFL students' autonomous online language learning:

It provides straightforward assistance to my language practices, both in the classroom and on the Internet. Without them, I could not have completed all on my own. (Gloria: 18 May 2016)

For me, employing instructions in language learning is a must. It is one of the most important types of materials in my English learning. (Roy: 18 May 2016)

EFL students actively sought scaffolding to support their language learning in an autonomous online context:

I always seek assistance actively when learning on the Internet. (Bob: 12 May 2016)

It changes the way I obtain help in language learning. ... Now I become more independent. (Susan: 12 May 2016)

While in the classroom, many students were more passive in seeking assistance to promote their language learning. As can be seen from Figure 5. 13 (*Q17: What do you do when you have some difficulties in your English learning in the classroom?*), most students (56, 36.7%) chose to wait for a teacher's help, instead of actively using various resources to overcome learning obstacles. Another 29 participants indicated that they did nothing to cope with challenges in EFL learning. Only 49 students claimed that they actively sought scaffolding from different means, accounting for around 31.8% of all participants in the study.

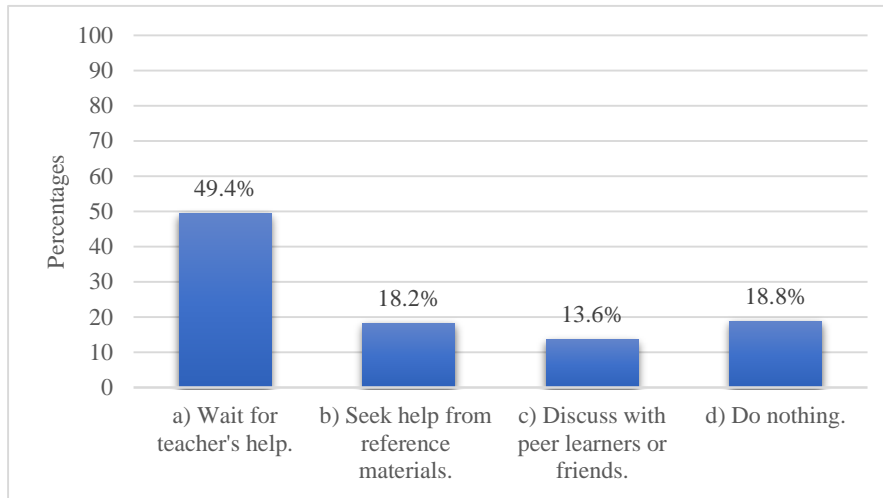


Figure 5. 13. Participants' strategy regarding learning problems in the classroom.

5.6.2 Soft scaffolding in online EFL learning

Two types of scaffolding were found to be involved in Chinese university EFL students' autonomous language learning; that is, soft scaffolding from persons, and hard scaffolding from learning materials. In autonomous learning, peer scaffolding played a role in helping participants improve their language abilities and knowledge. Students were supposed to play various roles in the process:

On the one hand, I play as a facilitator or a supervisor to help my peers' English learning. On the other hand, I am also a receiver of peers' assistance in the process.

(Adam: 12 May 2016)

I think that provides mutual benefits for language students. We could examine a given topic from different perspectives, which provides us with deeper

understanding of it. (Bob: 12 May 2016)

Students also mentioned that compared with teachers' scaffolding, peer scaffolding was more acceptable for them.

Peer assistance occurs in a more casual environment, which seems to be more acceptable for me. I am supposed to be bolder to make more detailed descriptions in English. (Betty: 19 May 2016)

Students, who always stand on an equal position to communicate with each other, may make the assistance process more successful. ... under this circumstance, I have more motivation to speak my mind. (Julia: 11 May 2016)

Peer scaffolding was also found to be an opportunity for EFL students to present their personal views on a topic, as well as a chance for them to learn from others:

It enables me to communicate with my peers, and to present my personal views. (Eric: 12 May 2016)

I treasure the opportunity. Peers' willingness to hear my voice is very important to me, and to my English learning. ... I see it as a kind of encouragement. (Aaron: 11 May 2016)

Meanwhile, teacher scaffolding was expected by this group of students, as an effective means for them to achieve their learning goals:

Teachers' necessary instructions should be incorporated in my language learning.

They are valuable and qualified. Compared with instructions from my peers, who are also language students like me, teachers might have more knowledge and experience in this field. (Bob: 12 May 2016)

Teachers' instructions are reliable and trustworthy. I strongly believe that with the support of them I could learn English language better and more effectively. (Susan: 12 May 2016).

Students considered teacher scaffolding as a necessity to their autonomous language learning:

Without teacher involvement, I might not participate in online learning. That is because I am not sure if the learning is qualified for me. And I also need a teacher's support in my learning process. ... For me, a teacher is irreplaceable for language learning. (Roy: 18 May 2016)

This was in line with students' indication in the questionnaire that the teacher's role cannot be replaced by technologies or modern digital tools in English learning (*Q20: Teachers can be replaced by modern technologies and digital tools in English learning*), which is shown in Figure 5.14:

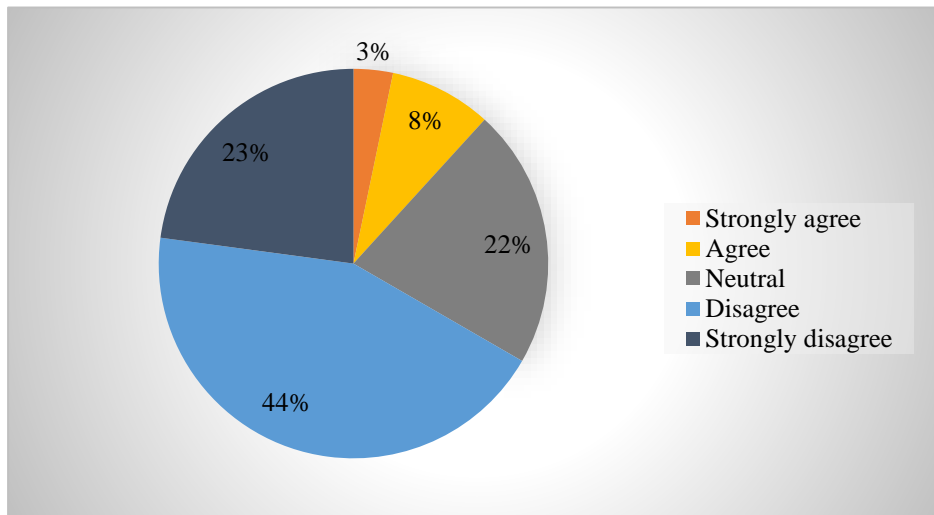


Figure 5. 14. Participants' views on teachers' role in English learning

As can be seen from the figure, a total of 102 students (approximately 67%) provided negative answers to the question, suggesting that teachers could not be replaced by computers in English learning, while 33 participants (around 21%) were neutral. There were only 18 students (12%) who agreed to employ modern technologies to replace teachers in English language learning.

5.6.3 Hard scaffolding in online EFL learning

Hard scaffolding was incorporated in this online EFL learning platform, aiming at helping students achieve their learning goals in an autonomous context through their independent learning. Statistics of hard scaffolding in three provided learning modules are shown in Table 5.16:

Table 5. 16

Tasks and scaffolding in each learning module

LM	Task numbers	Scaffolding numbers	Ratios
LM1	8	10	1.25
LM2	7	16	2.29
LM3	7	16	2.29
Total	22	42	1.91

As can be seen from the table above, for all learning modules, the ratio of hard scaffolded materials to tasks was around 1.91, meaning that for each learning task, on average nearly two pieces of scaffolded materials were prepared for EFL students. Compared with LM1, LM2 and LM3 had more scaffolded materials. Scaffolded materials were believed to provide EFL students with instructions and assistance to language learning in various forms. For example:

In my online learning, particularly individual learning, supportive materials are so important. Without them, I might abandon learning. (Alice: 19 May 2016)

I made heavy and repeated use of these supportive materials when learning on the platform, particularly for working on these difficult learning tasks. (Kent: 18 May 2016)

EFL students also pointed out that hard scaffolding could be matched with the learning in an autonomous context:

Those supportive materials play a key and critical role in my autonomous language learning, as teachers and peers do for most of the time. When I learn alone on the Internet, I prefer supportive materials than teachers or peers. (Tina: 12 May 2016)

It provides assistance without harming my own learning endeavours. ... Using it or not is entirely up to me. (Lydia: 11 May 2016)

Materials are more flexible to provide aids to my learning than peers or teachers. I can use them whenever I need. ... There is no need to consider if the instructions are available at this moment. (Olivia: 11 May 2016)

Due to its merits for facilitating EFL learning, particularly in an autonomous online context, participants of this study made use of hard scaffolding and provided some feedback to their employment:

I made heavy and repeated use of these supportive materials in online learning.
(Zoe: 12 May 2016).

It took me a considerable amount of learning time. ... Referring to instructions is also a way for language learning. (Olivia: 11 May 2016).

Hard scaffolding was also used by EFL students as a reference to promote their self-evaluation in the autonomous learning process:

I checked supportive materials, reference answers to learning tasks in particular, to evaluate my performance. ... If I complete most tasks correctly, I know it is the time to move to the next stage of learning. Otherwise, I prefer to review this part.

(Bob: 12 May 2016)

Solving a learning task correctly means I have acquired necessary English knowledge and skills in this part. It provides a reference to my independent learning, helping me have a picture of my progress. (Lydia: 11 May 2016)

Regarding two types of hard scaffolding, the explicit and the tacit, EFL students displayed their different attitudes in the study. The explicit scaffolding instructed participants' learning in direct ways. It was presented in forms of reference answers, notes, and scripts on the online learning platform. The tacit scaffolding provided less directive information to address students' learning problems. Instead, it facilitated students' learning by providing extending information that covered a wide range of topics and themes, including intercultural knowledge, background information, and historical stories. Participants' perceptions and employment of the two types of scaffolding were also not the same. EFL students preferred explicit scaffolding in their learning process, and spent more time on this type. For example:

Checking answers and comprehending them was demanding in time. But I believe that was worthy, as these scaffolded materials were valuable and informative.

(Betty: 19 May 2016)

I often used scripts on the platform. They helped me understand the content in videos. I often found myself having difficulty to comprehend the information in videos. Scripts could help me overcome such obstacles. (Kent: 18 May 2016)

It is the same with me. Compared with videos, which at least had visual information for helping comprehension, audios were even more difficult for me. Scripts were necessary in audio listening practices for me. (Adam: 12 May 2016)

For tacit scaffolded materials, these students were less interested. They indicated in this study that they made less employment of them:

I noticed there were some notes about background information, social and cultural ones, on the platform. I seldom used them for learning practices. They just provided some indirect assistance to learning tasks. They did not contribute significantly to my language learning. (Aaron: 11 May 2016)

This extending information usually exceeded my ability to accept. I do not want to spend too much time on online learning, so I skipped most of them. (David: 11 May 2016)

It should be noted that participants used the provided scaffolding in different ways to serve their individual language learning on the Internet. As some of them described in the interviews:

Sometimes, I looked up scaffolded materials before I worked on those videos, audios, and tasks. I supposed that would increase my correct rate in learning. (Carl: 11 May 2016)

It (scaffolding) was only used when I actually encountered some obstacles in learning that I could not solve by myself. (Bob: 12 May 2016)

Perhaps my ways (of using scaffolding) were different from others, nor the same as my teacher used to recommend. ... I used supportive materials as a hint. Usually, I would not read the instructions word by word, but picked up the key part to trigger my own idea. (Alice: 19 May 2016)

I used to look up those instructive materials immediately after I encountered any obstacles. ... I would not let those problems interrupt my learning. (Eric: 12 May 2016)

Some supportive materials were far beyond my ability to accept. I usually skipped that. (Bella: May 18, 2016)

It was demanding to integrate all provided supportive materials into my learning process. ... I forced myself to read through all of them. But that was burdensome. (Monica: 12 May 2016)

Data gathered from different means revealed a picture of Chinese university EFL students' perceptions and uses of different scaffolded resources to facilitate their online language learning. The challenges they were facing, as well as their concerns of scaffolding were also presented in this part.

5.7 Chapter summary

Both qualitative and quantitative data, collected via four different instruments, the questionnaire, individual interviews, focus groups, and documents, are reported in this chapter. The results of these data highlighted that Chinese university EFL students believed that CALL could make changes to their current language learning. By employing CALL after class, they could develop language abilities and knowledge to meet their individualized learning needs, which they could hardly achieve through traditional language learning and teaching in the classroom.

EFL students engaged in autonomous language learning for promoting their language abilities. They were confident to plan their learning, and discover appropriate learning resources independently via the Internet. These students were also able to employ autonomous online language learning to develop their language abilities in the long term. However, they had different perceptions of different learning materials and learning activities in the learning process, leading to imbalanced practice and development of their language abilities.

CALL provided an engaging environment for Chinese university EFL students to participate in interactive language learning. It was accepted by students as a positive approach for developing their language abilities, as well as communicative skills. Compared with interaction in a traditional in-class environment, autonomous online

interactive learning could help students take a more active part in learning, and have a more positive learning experience. It was noted that these students expected interactive learning in an autonomous online context could meet some specific needs, including modelling and familiarity issues, before they could actually engage in learning.

Chinese university EFL students could locate their individual ZPD in their online learning, and to frame their autonomous language learning into the range. It worked as a reference to EFL students to discover their preferred learning materials, multimedia types in particular, to serve their autonomous online learning. Corresponding learning strategies were also deployed by students to facilitate their learning with these new types of materials. It was also found from the study that self-evaluation was used in their learning, on the basis of which they arranged their learning activities for the next phase.

Various scaffolded resources, including soft ones and hard ones, were used by EFL students to promote their language practice and development. They were learning tools of importance for students to facilitate their language learning in an autonomous online context. While students' perceptions and employment of different scaffolding were not the same, the ways students used scaffolding were also investigated in the study, which might be influential on students' language development.

In the next chapter, detailed discussions of these data will be presented. It will combine a number of constructs, and integrate the references to relevant literatures, to investigate Chinese university EFL students' perceptions of and engagement in autonomous online language learning.

Chapter 6 Discussion: Students' perceptions of online EFL learning

Chapter 5 presented findings of participants' perceptions of and engagement in EFL learning in both traditional classroom context and an online context. This chapter discusses some major findings regarding Research Question 1 of this study: What are Chinese university EFL students' perceptions of learning EFL on an online interactive video-based learning platform? Students' perceptions of EFL learning are examined from the perspectives of four strains of theoretical construct in a CALL context, including: learner autonomy, interactive learning, ZPD, and scaffolding.

These findings are discussed with reference to relevant literature and theoretical constructs. It reveals a picture of Chinese university EFL students' perceptions and expectations of autonomous online English learning, and identifies the differences of learning in a new environment by making comparisons with its traditional counterpart. It also outlines the challenges EFL students may encounter in EFL learning in an online context.

6.1 Perceptions of CALL

6.1.1 Acceptance of CALL

It was shown in this study that Chinese university EFL students were usually passive in traditional formal language learning. Formal EFL learning and teaching in

China mostly occurred in a traditional teacher-centred environment (Xu, Wang, & Wang, 2012). Learning in this environment for long time (see Table 5.1), EFL students were acting as passive language knowledge receivers (Yan & He, 2010), instead of “being dominant in learning activities” (Susan: 12 May 2016). It was their teachers who “had the absolute control” of the learning (David: 11 May 2016).

Being involved in a teacher-centred context, Chinese university EFL students perceived the traditional learning could not fully meet their individual needs’ in foreign language development. The learning could not be decided by themselves (David: 11 May 2016), but was incorporated as a part into the collective learning, which was usually pushed by English teachers (Liang & Chen, 2011). As suggested by Simpson (2008), it was more possible for traditional in-class collective EFL learning and teaching to benefit the group, instead of individual students. Learning in this context, individual student might find the learning less satisfying as it might ignore their needs, but cater for those of the groups.

Furthermore, as teachers tended to play a more dominant role in the traditional learning context, students could hardly choose their preferred learning resources, nor had a control of the learning progress. It was “not easy” for individual student to adjust the pre-set learning schemes in the classroom. This made the language learning less suitable for their current language levels and learning situations (Lydia: 11 May 2016). Thus, many students believed the traditional EFL learning approach

“obviously failed” (Eric: 12 May 2016) to help them achieve their individual learning goals.

CALL, as “an innovative learning approach” (Aaron: 11 May 2016), which these students could employ to “tailor” the learning, was found to “make some changes” (Carl: 11 May 2016) to the traditional language learning and teaching in a Chinese university context. CALL can benefit EFL education by making its contents and strategies suitable for individual students (Al-Jarf, 2005). It was believed to help EFL students achieve “what could not be done in a traditional way” (David: 11 May 2016). CALL was expected to change their traditional EFL learning from the perspective of the learning approach, and to play an innovative role to bring about different outcomes to their language learning (see Table 5.3).

Previous studies have suggested that Chinese EFL teachers and students were accustomed to traditional textbook-based language learning and teaching (Gu, 2002; Yan, 2012). They were believed to be too conservative to embrace the innovations and revolutions of language education; that is, employing CALL and online technologies for English learning, practicing, and improving (Cui & Wang, 2008). Textbooks, test papers, dictionaries, and exercise books were largely used in English learning and teaching in China (Yan, 2012). Chinese EFL teachers and students were also thought to stick to traditional lecture-based and teacher-centred learning

approaches, which were widely used in the classroom in various levels of educational institutions in China (Cai, 2013; Mo, 2012).

This study makes a different voice. Participants indicated that they were willing to employ CALL as “a different learning approach” (Emily: 18 May 2016) from the traditional one for language ability and knowledge improvement. Modern ICTs were expected to create an engaging and workable environment and also to make the learning process interesting, encouraging students’ language development (Warschauer & Healey, 1998). Online EFL learning was recognized to be a positive approach to meet EFL students’ requirements of English language development in modern Chinese society (Chloe: 19 May 2016), where English is increasingly important as a foreign language (Bolton & Graddol, 2012; Chen & Zhang, 2010).

It reflected that Chinese university EFL students were familiar with the Internet and digital resources, and had “an open mind” to use them for language learning purposes (Eric: 12 May 2016). They were willing to employ CALL and the Internet for their language development, particularly “outside the classroom” (Julia: 11 May 2016). CALL and the online approach were “a workable option” (Eric: 12 May 2016) for language learning in the university context, and were preferable in their long-term language development. EFL learning was no longer limited to a classroom, nor to paper-based resources, but expanded itself to a broader context in language learning practice.

6.1.2 Challenges in CALL

Although CALL and online language learning had been increasingly accepted and employed as a routine approach for language development in a Chinese university context, EFL students still had some concerns about it. The study found that a major one was distraction (see Figure 5.5). Unlike learning in a traditional paper-based and lecture-based way, where the teacher was usually in control (Li & Walsh, 2011), using the Internet and computers for EFL practice often resulted in students' distraction. Facing the challenge, EFL students also adopted some measures to prevent distraction, which will be later discussed in 6.2.4.

It was noted in this study that digital devices, such as mobile phones and laptops, were a factor of distraction, as they were usually treated as “a communication or an entertainment tool” (Kent: 18 May 2016), rather than a tool for formal language learning. Consistent with previous indications, using these tools may distract students from learning in a CALL context (e.g., Lin, Chan, & Hsiao, 2011; Woessmann & Fuchs, 2004). Digital devices were described as a multifunctional tool, and by using them students might “hardly focus on learning” (Susan: 12 May 2016). Instead, they employed these devices for other purposes, such as “chatting with friends” and “playing videogames” (Eric: 12 May 2016). University students might not be good at self-regulation when learning online, as their autonomy in EFL learning is at a low level (Littlewood, 2009). Learning with digital technologies should be cautious.

Besides devices, attractiveness of digital learning materials, which is common in a CALL context, was found to lead to EFL students' distraction in their autonomous learning process as well. Students admitted in the survey that online English learning was interesting and attractive (see Figure 5.1 & Figure 5.2). However, the attractiveness of these resources for learning in a CALL context often led students to focus on materials, rather than on learning contents.

Students mentioned that interesting learning materials, such as “fancy learning materials”, “attractive videos”, “colourful pictures”, and “interesting puzzles” (Carl: 11 May 2016; David: 11 May 2016; Alice: 19 May 2016), easily distracted their attention in their learning process. They admitted that compared with learning, these materials themselves were more attractive. The distraction caused by learning materials has been widely recognized as an obstacle for learning in a CALL context in empirical studies (e.g., Gu, 2002; Kim & Kim, 2012; Kung & Chuo, 2002; Lin, Chan, & Hsiao, 2011; Yunus, Salehi, & Chen, 2012). Being distracted by digital learning resources remained a concern of Chinese university EFL students in their autonomous online learning activities.

It was summarized from this part that a CALL environment was believed to make changes to Chinese university EFL students' current language learning. It was expected to meet their individual learning needs, and to provide them with positive

learning experience. EFL students were prepared for and accepted engaging in language learning after class in a CALL context, while they were also facing some challenges. Their learning practice in an online environment will be further discussed in the following part (see 7.1) along with the data of their engagement.

6.2 Perceptions of learner autonomy

6.2.1 Attitudes towards autonomous EFL learning

CALL has created a resource-rich environment for EFL students, where students can find themselves opportunities for further develop their language abilities and knowledge. Learning in a CALL context, participants of this study indicated that they would actively employ available resources to promote their language learning in various ways, among which autonomous online language learning was “a good and mainstream choice” (Eric: 12 May 2016). The new approach was believed to help EFL students meet the increasing needs of foreign language abilities and intercultural awareness that are sourcing from academic institutions and the society of China (Han & Yin, 2016).

The study noted that for Chinese university students, after-class autonomous online learning was common (see Table 5.6). It has been widely accepted and employed for ability improvement in various educational settings (Hsu, 2013; Kim, 2008). As noticed by existing studies (e.g., Duan, 2006; Ling & Ning, 2001), Chinese university students invest large amounts of after-class time into autonomous EFL

learning. Autonomous learning was described as “a routine learning method” and “one of the major learning approaches” that could provide them with essential improvement of language abilities (Chloe: 19 May 2016). It was found that Chinese university EFL students did not limit themselves to the classrooms, but actively expanded their learning to a larger context, where they might have more exposure to language learning opportunities, and have access to more resources. The new learning was believed to help students’ EFL learning via a range of approaches, which are often not observable in a traditional classroom.

In this study, EFL students confirmed the potentiality of autonomous learning to language development through a wide range of digital resources and various solutions to their learning problems (Chloe: 19 May 2016). As they indicated, their development of language knowledge and skill “relied largely on” (Julia: 11 May 2016) this self-initiated learning, particularly when current in-class learning and teaching was believed not to meet their needs of language development (see Figure 5.3). Students mentioned that the in-class learning

Participants’ perceptions were consistent with previous indications that autonomous learning was a positive approach for EFL development (e.g., Hwang, 2005; Means et al., 2009).

Besides academic development, findings from the study also suggested that autonomous EFL learning was accepted as a way to meet Chinese university students' "social needs" (Tran, 2007). For some students, to be involved in EFL learning activities was to "socialize with friends" (Bob: 12 May 2016). Technology-supported language learning was described as a "fashionable way" for language development among Chinese university students (Gloria: 18 May 2016; Julia: 11 May 201). Under this circumstance, EFL students chose autonomous online EFL learning, because "everyone I know" (Gloria: 18 May 2016) chose it. Otherwise, those who insisted on different learning approaches, such as the traditional paper-based one and the lecture-based one, would be treated as "an isolated person" and "a stick-in-the-mud", which might impose negative influence on their interpersonal relationships with peers (Lydia: 11 May 2016).

The traditional in-class EFL learning and teaching was described as a typical collective learning approach by participants, which "benefited the majority", instead of "each single student" (Chloe: 19 May 2016). In a more collectivist society, such as China and some other East Asian countries (Chen, Nassaji, & Liu, 2016), peer learners often learn in a similar context with similar learning resources (Kelly, 1996). Individual interest are often outweighed by the group's in a collective society (Liang & Chen, 2011; Tran, 2007). The traditional approach might lead to "a compromise of" (David: 11 May 2016) EFL students' individual learning needs. A Chinese student, who was learning in this circumstance, possibly had a relatively low level of

autonomy as an individual learner, and followed the collective blindly (Ning, 2010; Ying, 2002).

Findings from the study suggested that Chinese university EFL students believed technology-supported language learning could make changes to the collective learning (see Table 5.3). This group of EFL students claimed that they were “learners with autonomy” (Carl: 11 May 2016), and believed they were “almost fully autonomous” (Monica: 12 May 2016) in online learning. They were becoming “higher degree autonomous learners” (Littlewood, 1999), who were supposed to take full responsibility through making decisions, including planning learning, setting goals, selecting materials, and making adjustment, in online EFL learning (see Table 5.7).

This finding is different to previous indications that Chinese university students usually have problems with independently planning and conducting autonomous language learning (Kuo, 2003; Lo, 2011; Yang, 2003). Instead, participants specified that it was “easy and happy” (Kent: 18 May 2016). They explicitly expressed their preferences for “a sense of self-regulation” in autonomous EFL learning (Adam: 12 May 2016). Students indicated that their learning experience was different from that in the classroom, where teachers always played a dominant role, and took control of the learning (Hu, 2002; Zheng & Davison, 2008). Students perceived to get their

autonomy “promoted” (Peter: 19 May 2016), and became independent from “external interventions” (Liu, 2012), such as a teacher’s instructions, in the learning process.

6.2.2 Technology-supported autonomous EFL learning

Participants in this study indicated that technology-supported language learning promoted them to become autonomous in language learning (see Figure 5.6).

Participants felt “encouraged” (David: 11 May 2016) to take control of their language learning in an online context. The employment of ICTs allows space for autonomy exercise that plays a role in improving EFL students’ autonomy, as well as their learning outcomes (Tang, 2009; Zhang, 2009). From “following a teacher’s schedule blindly” in a traditional learning context, to “tailoring my own learning” in an online learning environment (Chloe: 19 May 2016), EFL students were taking increasing responsibility in the process, which indicated the promotion of learner autonomy (Arıkan & Bakla, 2011; Sockett & Toffoli, 2012).

It was described by participants of the study as “a perfect match” (Aaron: 11 May 2016) of learner autonomy and online language learning. The integration of ICTs not only elevates students’ autonomy in EFL learning, but also enhances learners’ learning experiences (Watkins & Wilkins, 2011). Technology-supported autonomous learning allowed EFL students to “customize” their own learning activities, for “purposely serving my personal learning needs” (Betty: 19 May 2016). Information obtained from this study reflected that these students combined the learner autonomy

with CALL for language development, and put it into practice. Their autonomous learning practice in a CALL context will be further discussed in 7.2 along with the data on their engagement.

It is interesting to find that students believed not all technology-supported EFL learning and teaching brought about substantial changes to their current in-class English learning: it only made traditional paper-based textbooks electronic (Li, 2015; Wang, 2009) as “another form of textbooks” (Monica: 12 May 2016). Although ICTs have been used in language learning and teaching in China for a long period of time (Hu & McGrath, 2011), much of this technology-supported learning and teaching is not used to serve autonomous learning. Instead, teachers and students simply employed digital resources as a tool for presenting existing texts and tasks in the classroom (Li & Walsh, 2011).

Furthermore, EFL students felt themselves to be still “trapped in the classroom” (David: 11 May 2016), rather than learning on an autonomous basis, even though the technology-supported learning approach was accessible for them. Much in-class technology-supported EFL learning and teaching is teacher-centred and teacher-dominant (Li & Walsh, 2011; Wen & Clement, 2003). That could not meet students’ individual learning needs, which “varied significantly” (Eric: 12 May 2016). It suggests that simply employing digital devices into an EFL class, without the incorporation of qualified student-centred materials, cannot support the development

of learner autonomy, nor change the traditional way of language learning and teaching.

The study noticed that new online EFL learning and teaching was expected to make changes to current technology-supported EFL education in a Chinese university context with the integration of learner autonomy (see Table 5.3; see 6.1.1). It was expected to create a space for promoting learners to better complete learning activities and enjoy the learning process in an independent and friendly environment (Benson, 2001; Buckingham & Willett, 2006; Whyte & Alexander, 2014). EFL students indicated that they preferred to use the digital resources to serve the needs of individual students, and to assist them to make appropriate decisions on their own learning issues for fulfilling different purposes. That was perceived to be successful autonomous online language learning (Lydia: 11 May 2016).

It should be noted that these EFL students believed that current test-oriented language learning and teaching limited the uses of their acquired linguistic knowledge within a small range. It was found that a considerable number of Chinese university EFL students used to learn a foreign language exclusively for academic requirements (see Table 5.3 & Figure 5.7), which was consistent with previous indications (e.g., Gao, 2007; Zhu, 2003). Many of them studied EFL for “getting high scores in various language tests” (Clark: 12 May 2016). That largely impeded their constant language

development, and discouraged them from developing their language abilities in a well-rounded way, and did not support their intellectual development.

The CECR (MoE, 2007), a reform policy of China's English learning and teaching at the university and college level, was launched by the government to change the situation. The CECR (MoE, 2007) advocates college EFL learning and teaching should cultivate students' ability "to learn independently", leading towards "cultivating students' lifelong learning ability", and "using English in a well-rounded way".

The advocates of development of learner autonomy and EFL abilities received echoes from students. It was found that the purpose of this group of EFL students' language learning was not on test scores exclusively, but also to support further knowledge development of an individual learner (see Table 5.3 & Figure 5.7). It indicated that these EFL students owned some degrees of autonomy in language learning (Kötter, 2001). They were not "examination machines", as traditional thinking had claimed. As noticed from this study, this group of EFL students, learning in an autonomous CALL context, could reasonably set their learning aims, and expand their EFL learning to a larger context. Moreover, they also showed the sign to "continue autonomous online learning" after graduation for further development of their EFL abilities (Olivia: 11 May 2016), and to employ their EFL knowledge for learning of other subjects. As Murphy (2007) has put, these participants appeared to

be autonomous learners, who usually focused on intellectual practices and long-term development.

Autonomous online EFL learning was thought as “a good approach” (Tina: 12 May 2016) for cultivating and triggering EFL learners’ willingness to engage in a future learning process, and develop their abilities in the long term (Lebow, 1993). As previous studies have noticed, it encouraged students to gain increasing autonomy in the learning process, and to develop their autonomy for constant learning endeavours, instead of meeting a short-term goal (e.g., Almekhlafi, 2006; Kim & Kim, 2015; Rubin, Katznelson, & Perpignan, 2005; Su, 2005).

Participants of the study believed that online EFL learning could support “my constant development in academia or in industry” (Carl: 11 May 2016). EFL students were no longer limited on short-term learning, but also put the focus of learning on the long-term intellectual development, as well as “personal knowledge system construction” (Lydia: 11 May 2016). The online approach was thus incorporated into a student’s language learning, contributing to the well-rounded development of an autonomous learner, and eventually a well-rounded person.

EFL students’ autonomous online learning reflected that they had displayed “multi-dimension” (Lai, 2017) of learner autonomy. They could use EFL to communicate with peers in autonomous learning (as a communicator), and to engage

in constant learning activities for further development (as a learner). They displayed their expectations and willingness to “have more control” (Aaron: 11 May 2016) of their learning, and to become a higher degree autonomous learner (Littlewood, 1996). It will eventually contribute to generate their personal learning ecologies for lifelong learning; that is, autonomy as a person (Candy, Crebert, & O'leary, 1994; Lai, 2017).

6.2.3 Resources in autonomous EFL learning

In autonomous learning, the learning materials went beyond the limits of traditional paper-based textbooks. The study found that the online environment was treated as “a big pool” to provide EFL students with “infinite” (Emily: 18 May 2016) materials, “both in types and quantities” (Frank: 18, May 2016). It was emphasized as a way to provide various types of materials, including audios, videos, pictures, comics, puzzles, and newly designed interactive materials (e.g., Etemadi, 2012; Hwang & Huang, 2011; Park & Jung, 2016; Saito & Akiyama, 2018), from which students could discover materials for their individualized learning purposes (see Figure 5.7; Table 5.8). As an important part of autonomy practice, EFL students need to select appropriate materials in a resource-rich context, and put them into practice to essentially promote their language learning (Morino, Lopez, & Ono, 2017; Son, 2018).

Facing a large number of learning resources, Chinese university EFL students were found to be confident to find themselves learning materials “of appropriate

difficulty and appropriate topics” (David: 11 May 2016) via the Internet to serve their autonomous learning. It was perceived to be “not hard” (Eric: 18 May 2016) by participants in the study, since the Internet was considered as a “mature” and “reliable” (David: 11 May 2016) source for language materials. Compared with the traditional learning approach, the autonomous online learning was found to enable EFL students to access a wider range of learning resources, while it also provided a direction to them. By following this direction, EFL students could locate the resources that they actually needed, rather than getting lost in the resourceful pool. The Internet has been recognized as a workable tool to meet EFL students’ individualized needs in terms of learning resources (Huang, Chern, & Lin, 2009).

Using computers and the Internet to find appropriate learning materials was found to be common among these students for a long period of time for autonomous learning purposes. For example, a participant indicated in the interviews: “I usually browse English news via the Internet. ... once or twice per day” (Monica: 18 May 2016). The Internet served routine learning of EFL students, and continuously contributed to autonomous language development (Chan & Liou, 2005; Huang, 2011; Schuetze & Slowey, 2002). It reflected the possibility for EFL students to “build my own learning” (Peter: 19 May 2016) on an autonomous basis in an online space, instead of being “trapped” by assigned learning contents that are usually decided by English teachers in the classroom (Hu, 2005; see Table 5.4).

Previous studies have considered that Chinese EFL students had neither experience nor enough knowledge to select qualified resources in an autonomous context (Tseng, 2009). EFL education in China has employed teacher-dominant English learning and teaching methods for a long time (He & Lin, 2013). Chinese university EFL students usually conducted “strictly planned learning” scheduled by their teachers, and hardly participated in the selection and organization process of learning (Carl: 11 May 2016). Traditionally, students in the university seldom had opportunities to select their preferred resources in a teacher-centred environment (Xu, 2012).

Contrary to the previous thinking, however, this study argued this group of Chinese university EFL students owned some degrees of autonomy, and had the confidence to exercise autonomy for EFL learning in an online context (see Table 5.7). Through learning online, they were experiencing an ongoing transfer from the teacher-led language learning to a student-centred autonomous one. In autonomous EFL learning, students constructed their knowledge in accordance with their “individually different learning needs and interest” (Lydia: 11 May 2016) through seeking information in a broader sociocultural context, rather than within the classroom range (Chan, 2003; Kember, 1997). EFL students gradually gained control and took increasing responsibility of their language learning within a sociocultural framework (Lebow, 1993), where the integration of ICTs into language learning could support and encourage the development of learner autonomy (see Figure 5.6).

6.2.4 Challenges in autonomous EFL learning

Being “novices in autonomous learning” (Lydia: 11 May 2016), these EFL students also faced some challenges and obstacles, among which distraction was a concerning one (see Figure 5.5), particularly in a CALL context (see 6.1.2). Learning distraction is common in autonomous learning (Gorski & Young, 2002). It has been widely recognized as a by-product of autonomous learning, where external supervision is usually weak (e.g., Basaran, 2013; Langfred & Moye, 2004; Mosquera, 2017; Shahlou & Izadpanah, 2016).

Regarding participants’ learning regulation, it reflected that EFL students had a relatively low degree of autonomy in language learning as defined by Littlewood (1999). It was found that at this stage, EFL learning for these participants was largely other-regulation. They relied on external supervision from either teachers or peer students, instead of constraining behaviours all by themselves during the learning process (Fung, Yuen, & Yuen, 2014). As a student described in the interview: “without teachers’ supervision and control, it was easy for me to wander on the Internet, instead of focusing on learning” (Aaron: 11 May 2016). It might be a little demanding for them to be entirely independent from teachers’ or peers’ supervision in online learning at this stage.

Participants believed that measures were needed to help them “become autonomous learners from a low degree to a targeted one” (Gloria: 18 May 2016) by overcoming distraction, and other obstacles in learning for students at their early stage of autonomy development. It would be workable to elevate their autonomy gradually by creating a transitional learning environment (Littlewood, 1996). By learning in the environment, EFL students could gain more independence and autonomy by taking increasing responsibilities with the gradual withdrawal of teachers’ control in their learning process. EFL students’ measures to cope with distraction in autonomous language learning will be further analysed and discussed in 7.2.1 and 7.2.2.

A controversial debate on EFL students’ perceptions of current in-class EFL learning and teaching occurs in Chinese universities. Some studies have claimed that EFL students give compliments to current English courses in the university (e.g., Hu, 2005; Lam, 2002; Wang, 2007), indicating which provide good trainings for language development and fulfil the needs of both students and society; while others have some doubts with this traditional lecture-based in-class English education (e.g., Cai, 2013; Mo, 2012; Rao, 2002). In the current study, results showed that most of the participants (69%) were not satisfied with the in-class English learning (see Figure 5.3).

It was noted that current English learning and teaching in China was not on a volunteer basis. Instead, it was replaced by the “forced engagement” (Chloe: 19 May

2016) in a Chinese educational setting. Most students in the university had been studying EFL for more than 7 years, and were under the influence of compulsory English courses in a long time (see Table 5.1). They hardly had the room to develop their autonomy. That went against the principle of autonomous learning (Fjordside & Morville, 2012), and did not provide a flexible context for the development of students' autonomy in practice (Beauchamp & Childress, 2013; Kim, 2016).

Being criticised as “strict without any autonomy” (Bob: 12 May 2016), current in-class EFL learning and teaching received some negative comments from students. Participants indicated that traditional EFL learning was “boring and rigid”, which “hardly aroused my learning interest” (Gloria: 18 May 2016). There were also students who pointed out that their traditional EFL learning could not provide their preferred learning materials, since it focused on teacher-assigned learning tasks (Bella: May 11, 2016). Learning in this context, students became passive knowledge receivers, instead of active knowledge constructors (Holec, 1981). Thus, some students described the in-class English learning as “non-autonomy learning” (Lydia: 11 May 2016).

In addition, EFL students perceived themselves to be in “a passive comfort zone” (Roy: 18 May 2016) in the traditional learning context, where their teachers always played a core role (Xu & Liu, 2009). They reported following “strict guidelines formulated by the government” (Carl: 11 May 2016). It “left little room for

student-made decisions” (Alice: 19 May 2016). As noted by previous studies, a teacher-centred mode for EFL learning and teaching is widely employed in the classroom in China (Cortazzi & Jin, 1996; Ellis, 1996; Zhong & Shen, 2002). The traditional teacher–student one-way mode is the mainstream in the history of EFL learning and teaching in China, negatively affecting students’ English language practices (Hu, 2005; Rao, 1996), and “severely impeding” (Zoe: 12 May 2016) students’ development of autonomy.

Furthermore, in-class English learning was thought to “mainly serve language tests and examinations” (Julia: 11 May 2016), rather than the well-rounded development of language abilities and knowledge. It was listed as one of the biggest reasons for participants’ dissatisfaction with this approach (see Figure 5.4). It ignored other perspectives of language development, such as ideational, interpersonal, and textual (Halliday, 1978; Ting-Toomey & Chung, 2005), and “spent too much time on preparations for language tests” (Alice: 19 May 2016).

A considerable amount of EFL students were found to study English to fulfil the curriculum requirements for graduation in the university (see Table 5.5), which was in line with previous indications (e.g., Xu & Liu, 2009; Zheng & Cheng, 2008; Zhu, 2003). Once they have obtained enough credits and scores from the compulsory English courses, they might abandon EFL learning, and conduct no further foreign

language development (Aaron: 12 May 2016). It went against the aims of autonomous learning, and failed to meet the requirements of the CECR (MoE, 2007).

Learning in this context, EFL students in the university could hardly have the opportunity to make decisions on their own learning in the classroom (Emily: 18 May 2016). They were relying heavily on their teachers for planning and promoting learning in the classroom (Monica: 12 May 2016). That failed to provide a space for the elevation of the level of self-determination, which should have been a key factor for the promotion of learner autonomy (Wang et al., 2016; Wehmeyer & Shogren, 2016).

It was also noted that simply integrating modern ICTs into the classroom could not always elevate students' autonomy, nor necessarily made changes to the learning. In-class English learning and teaching in China has witnessed the use of multimedia resources for a long time (Tang, 2009; Zhang, 2009). However, it was only thought as "texts on screen", rather than a new learning approach for language development (Naylor, 2012). Many participants of this study indicated that current employment of technologies did not make innovations to current in-class English learning, nor bring about essential changes to their learning (Betty: 19 May 2016).

Chinese university EFL students perceived that the traditional teacher-centred EFL learning and teaching in the classroom could not provide room for the

development and exercise of learner autonomy, nor lead to productive learning outcomes. To promote autonomy in EFL learning, it would be necessary to involve students into the process of making decisions on learning-related issues, and allow them to make adjustment to their learning on the basis of their individual learning situation, rather than simply employing ICTs into learning.

It was summarized from this part that Chinese university EFL students were confident about their learning in an autonomous online context, where they could discover appropriate resources to best suit their learning situations and current language levels. Online learning was also believed to create a friendly learning context to support students' constant language development to meet their individualized learning needs, which could hardly be achieved by traditional means. Due to a lack of external supervision from teachers and peers, students were concerned about some challenges in autonomous learning, distraction being a key one. EFL students' engagement in autonomous online learning will be further discussed in 7.2.

6.3 Perceptions of interactive learning

6.3.1 Traditional interactive learning

Like other learning activities in the classroom, the current interactive EFL learning was also perceived to be “a failure” in a traditional context by EFL students. Although interactive learning has been widely recognized as an effective approach for

language development (e.g., Cao & Philp, 2006; Craig, 2006; Gladwin & Stepp-Greany, 2008; Kuo, 2011; Lee, 2007; Salca, Moldovan, Orza, & Vlaicu, 2013; Tian & Suppasetsee, 2013), it was not well developed or employed in a traditional in-class learning context. A lack of interactive practice has been observed in traditional in-class learning in China (e.g., Carson & Nelson, 1996; Jin & Cortazzi, 1996; 2006; Liu & Jackson, 2008; Rao, 1996). Three factors were detected in this study to impede the exercise of interactive learning in the classroom: teacher-centred learning, insufficient engagement opportunities, and foreign language anxiety.

The study argued that learning in a teacher-centred context did not provide interaction that could “address a specific issue that actually occurs in my life” (Kent: 18 May 2016) as students expected. Limited “shared understanding” or “alternative solutions and hypothesis building” (O’Malley, 1995, p. 289) among participants was generated in this interactive context, as the topics of such interaction were far away from students’ experience. Trainings students received from the interaction did not put the roots in a social context. The interaction focused too much on the linguistic aspects of language learning, but failed to integrate cognitive development into language learning, and failed to meet students’ needs of essential language ability development (Lave & Wenger, 1991; Vrasidas, 2000). The interaction was believed to “obviously failed” (see Table 5.4) students’ expectations, resulting in their withdrawal from engagement, as reported in the current study (see Figure 5.4).

Although participants admitted that there were abundant interactive learning activities in the classroom (see Figure 5.10), they did not engage in actively. Traditional in-class learning and teaching failed to create an engaging learning context for interaction (Li & Peng, 2016; McKay, 2016). Traditional means for interaction, such as face-to-face ways, were not always accessible for EFL students (Bella: May 12, 2016). A considerable number of participants in this study indicated that they had obstacles, “mainly time and distance limits” (Eric: 12 May 2016) in participating in interactive learning in the classroom.

In addition, Chinese EFL students often felt difficult to join in interactive learning activities as “a contributing member” of a group in English classes, finding themselves “attending rather than engaging” (see Table 5.4; Clark: 12 May 2016). Some of these EFL students were involved in interaction without saying anything most of the time, but only stayed as a silent member of the group (see Figure 5.12). It reflected that the traditional interactive learning only provided limited opportunities for meaningful language input and output practices for Chinese EFL students. For these students, interaction opportunities were not always accessible in the classroom.

In a traditional EFL learning context, foreign language anxiety was also found to be an impeding factor that prevented students’ engagement in interaction. Foreign language anxiety refers to “the feeling of tension and apprehension specifically associated with L2 contexts, including speaking, listening, and learning” (MacIntyre

& Gardner, 1994, p. 284). Fear of negative evaluation, from either themselves or others, “including both teachers and peers” (Carl: 11 May 2016), is a major component of foreign language anxiety in interactive learning (Horwitz, Horwitz, and Cope, 1986).

It was reported that these EFL students often suffered from foreign language anxiety. They were “worried” or even “afraid” (see Table 5.4) of being laughed at by classmates in public. They also indicated that concerns of “low evaluation from teachers” (Flora: 11 May 2016) in the classroom prevented them from actively participating in in-class interaction. In Eastern Asia and in Confucian heritage countries such as China, it is common for EFL students to suffer from foreign language anxiety (Bernat & Lloyd, 2007; Cutrone, 2009; Doyon, 2000; Nazara, 2011; Riasati, 2012), and thus to keep silent in interactive learning activities, particularly in a formal learning context, to avoid others’ negative evaluation (Chen & Goh, 2011; Liu & Jackson, 2008).

The experience of interactive learning in a face-to-face way was described as “unpleasant” and “boring” in the interviews (Carl: 11 May 2016; Peter: 19 May 2016). The traditional way of interaction failed to take students’ feelings into consideration. It did not provide comfortable learning experiences; that is, enjoyable and attractive learning (Peterson, 2006; 2012) for students. It created a learning context, where students might be easily influenced by teacher and peer negative evaluation, and feel

anxious about their foreign language learning. That might discourage them from engaging in interactive learning in the classroom.

6.3.2 Technology-supported interactive learning

The technology-supported interactive learning was perceived to have various merits regarding learning contents, opportunities, and anxiety, making it easier for students to get involved (see Table 5.12). With the explosion of ICTs and widespread affordable digital devices, a friendly environment for interaction has been deployed for language learning (Bañados, 2006; Miyazoe & Anderson, 2010; Razak, Saeed, & Ahmad, 2013). Technology-supported interactive learning has achieved some good results, such as enjoyable experience (Promnitz-Hayashi, 2011; Ying, 2002), less physical limits (Chang, Pearman, & Farha, 2012), more participation opportunities (Bernard et al., 2009; Castaño, Duarte, & Sancho-Vinuesa, 2014) and encouragement (Wu, Yen, & Marek, 2011). Online interaction was used by EFL students as a positive approach for language learning, as found in this study.

The mutual promotion of learner autonomy and online interactive language learning was noted in this study. Online interactive learning was described as an opportunity for them to “learn for myself” (Peter: 19 May 2016). Participants admitted gaining more control of learning activities, and made “real decisions” (Gloria: 18 May 2016) on more learning-related issues in online interactive learning. Students, learning in an online context, decided the learning resources that were

suitable to their own learning situations and needs. They also had a control of their learning progress as their language ability developed. In this process, their autonomy was promoted, and students gained more experience in learning in an autonomous context. This finding is consistent with previous ones, which have suggested that interactive learning is of importance for promotion of learner autonomy (e.g., Benson & Lor, 1998; Martínez-Lirola & Rubio, 2009; Mayora, 2009; Trajtemberg & Yiakoumetti, 2011).

This study found that one of the major benefits of integrating ICTs into language learning was to create an engaging context for interaction (see Figure 5.1). In the online interactive context, EFL students could select interactive tasks “where I was allowed to play a central role” (see Table 5.2). They felt themselves as “a key component” of learning activities (Eric: 12 May 2016), rather than a passive receiver in a traditional setting (Holec, 1985). In an online learning context, interaction is supposed to function as a positive element to the generation of autonomy (Little, 2003).

The Internet was also found to provide “strong and comprehensive support” to their interactive learning activities, including “sounds, texts, or even live videos”, and communication with others in various ways (Roy: 18 May 2016). It was believed to trigger their ideas and to enable them to address a specific issue from different angles (Carl: 11 May 2016). Through “multi-directional negotiations with his or her

community” (Dang, 2010: p. 4) in this engaging sociocultural-shaped environment for language learning, learner autonomy is elevated (Miller, 2009; Smith & Ushioda, 2009).

Interactive learning is naturally characterized by autonomy (Schwienhorst, 2002). As Lee (2011: p. 89) has put, learner autonomy comes with “self-directness, critical reflection and cognitive engagement”. “Actual engagement” (Clark: 12 May 2016) in interaction in an online context enabled this group of EFL students to actively and autonomously deal with learning issues in practice through interacting and negotiating with peers, teachers, and various sources, which reflected the role interaction played to facilitate autonomy improvement (Sinclair, 2009; Toohey, 2007).

It should be noted that using English for communication and interaction, either with teachers or with peers, was “scarce” (Monica: 12 May 2016) among Chinese students. These participants seemed not to study English for interactive purposes but for language tests, as previous studies have noticed (Ling & Braine, 2007; Rao, 2002). On the basis of these learning aims, opportunities for interaction in English language is largely compromised by English teachers in China (Zhang & Koda, 2013). Students felt their engagement in interaction in English was “not frequent” (Ben: 11 May 2016). As reported in this study, these EFL students were quite passive in interactive learning that occurred in the classroom (see Figure 5.11 & Figure 5.12).

By blending ICTs into interactive EFL learning, an opportunity-rich environment to interact with others in English was created (see Table 5.12). Learners could have more opportunities to engage in learning activities via the Internet (Shi, 2006). Engaging in technology-supported interactive learning enabled learners to be exposed to a large number of cognitively complex target language uses (Sharan, et al., 1984). A higher level of cognitive development and language development should be achieved through online interactive learning as well (Leahy, 2008). Technology-supported interactive learning served as a catalyst for language learners' knowledge construction and understanding (Benson, 2007).

Participants indicated that they liked to engage in interactive EFL learning in a virtual space, which was “a comfortable learning environment” (Lee: May 18, 2016). A positive impact of online interactive learning on EFL students' engagement, performance, as well as outcomes in interactive learning was found both in this study and previous ones (e.g., Chu, 2008; Jeon, 2014; Milton, 2005; Varli, 2013; Shen, 2011). The Internet provided a low-anxiety learning environment for students (Yi & Majima, 1993), where they felt “easy and relaxed” (Betty: 19 May 2016) to interact with others. It also encouraged EFL students, who were usually shy in face-to-face interaction, to take part more actively in learning activities (Freiermuth, 2002). Students could “present my opinions boldly” (Flora: 11 May 2016) with less concerns of shyness or embarrassment in an online context.

It was noted in the study that online interactive learning benefited students by providing a low-stress environment that encourages their risk-taking, where students were willing to exchange their ideas (see Figure 5.1; Table 5.4). That enables language learners to have more exposure to learning that benefits their language development (van Lier, 1996). EFL students suffered less from foreign language anxiety in such a friendly learning context, and could have enjoyable learning experiences, as well as positive learning outcomes. EFL students' interactive learning practice with less suffering from foreign language anxiety in an online context will be further discussed in the following part (see 7.3).

6.3.3 Challenges in interactive learning

Although interactive language learning has been widely recognized as an effective learning method (e.g., Begum, 2011; Mathew & Alidmat, 2013; Yeh & Lehman, 2001), some students were found not to participate in it. It is common in EFL learning and teaching across the world (e.g., Chu, 2008; Pattapong, 2010; Peng & Woodrow, 2010). Many participants admitted that they had positive perceptions of autonomous online interactive learning that were incorporated with student-centred learning contents, and confirmed its effectiveness in helping them improve their language abilities; however, some of them indicated that they were not involved in interactive learning activities for most of the time, even though abundant opportunities had been provided (Aaron: 11 May 2016).

This study found that students' perceptions of learning efficiency and L1 mediation of interactive learning were responsible for their withdrawal from learning. EFL students' knowledge on interactive learning usually imposes some impacts on their engagement and performance in learning activity (Reeves, 1999). In the current study, interactive EFL learning was perceived as a "low-efficient" learning approach, which was "demanding in time with less reward" in language development (Roy: 18 May 2016). In an autonomous learning context, students usually take efficiency as one of their prior considerations when planning and monitoring their learning (Dickinson, 1987). Students "would rather spend time on other training", instead of "wasting it on interaction" (Olivia: 11 May 2016). Although students admitted the effectiveness of interactive EFL learning (see 6.3.2), they doubted that they could make noticeable improvement in language abilities in interactive learning. Therefore, they might escape from interaction. As Rodrigues (2007) has put, students' beliefs on the learning prevented them from engaging in learning activities

It should be noted that Chinese university EFL students might not precisely recognize the effectiveness of some learning activities, nor independently evaluate their acquisition after a long time learning in a teacher-dominant context (see Table 5.1). Chinese EFL students used to be dependent on their teachers to assign learning tasks and activities (Severino & Prim, 2015; Zhan, 2008). It was their English teachers who were responsible for evaluating students' performance and abilities in the learning process, while students were deprived of access to formal self-evaluation

in the classroom (Buendía Arias, 2015; Chen & Sercu, 2015). That might lead to a “bias” (Susan: 12 May 2016) against interactive EFL learning.

Studies have confirmed the positive effects of using the mother tongue (L1) in interactive learning on the promotion of language development (e.g., Villamil & Guerrero, 1996; Yang, 2006; 2014; Yu & Lee, 2014; Zhao, 2010). Although some other studies have argued that the use of L1 in EFL/ESL learning impedes the development of target language (e.g., Gass & Selinker, 1983; Guk & Kellogg, 2007; Kang, 2005; Storch & Aldosari, 2010), and reduces the effectiveness and efficiency of target language learning (e.g., Liao, 2006; Liu & Shaw, 2001; Watcharapunyawong & Usaha, 2013), appropriate use of L1 in interaction should be beneficial.

However, this study noticed that L1 communication was considered by participants to impede their language development in interactive learning, rather than being a contributor. In EFL students’ interactive language learning, L1 was frequently used (see 7.3). They often found themselves “using L1 unintentionally”, which was considered to “be no good for English learning” (David: May 18, 2016). Some of them also indicated that using L1 in communication led to a “depressing experience” (Susan: 11 May 2016). As indicated by Swain and Lapkin (2000), treating the use of L1 in interactive language learning completely as a disrupter of L2 learning fails to recognize the language as a cognitive tool of knowledge construction.

Furthermore, participants of the study admitted that they “employed L1 to organize words and sentences and then translated them into English” when interacting with peers in their learning process (Olivia 11 May 2016). They did not treat this as a mediation process, which should have been facilitated by both L1 and L2 (Lantolf & Thorne, 2006). This group of EFL students failed to reasonably view their use of L1 in interactive learning, or make appropriate use of L1. They simply and incorrectly took L1 use as an interference, ignoring its positive mediation function in EFL learning.

This part investigates and discusses Chinese university EFL students’ perceptions and cognitions of interactive language learning. It makes a comparison between the in-class interactive learning and the technology-supported interactive learning, arriving at the finding that EFL students usually had more positive perceptions of the latter, in terms of the integration of learner autonomy, student-centred learning, and friendly learning environment. However, it also notices that EFL students were facing some challenges in interactive learning, which to a certain degree prevented their engagement in it. It includes the concerns of distraction, foreign language anxiety, inappropriate cognition on interactive learning, and L1 mediation.

6.4 Perceptions of ZPD in EFL learning

6.4.1 EFL learning in individual ZPD

The study suggested that online EFL learning made it possible for EFL students to learn within their individual ZPD. EFL students could “enjoy the learning processes” (David: 11 May 2016), as well as productive learning outcomes in the range, where students are supposed to enjoy essential improvement in language abilities and knowledge with appropriate scaffolding (Barrett, 2008; Hussin, 2011; Yu, 2004). Learning within the ZPD has been recognized as an effective approach that provides students with suitable learning in accordance with their current language levels (e.g., Chan & Liou, 2005; Huang, Chern, & Lin, 2009). It was in EFL student’s individual ZPD where language learning and acquisition should take place (Freeman & Freeman, 2011).

It was thought that Chinese university EFL students, who have been learning a long time in a teacher-dominant context (see Table 5.1), were accustomed to depending on their teachers in language learning. They were considered to have limited knowledge and cognition on their ZPDs (Xu & Liu, 2009; Zhao & Coombs, 2012; Zhong & Shen, 2002). Scholars doubted that these students might not be able to independently locate their individual ZPD, or find out appropriate materials to serve their autonomous learning (e.g., Gan & Humphreys, 2004; Lo, 2010; Zeng & Murphy, 2007).

In the meantime, EFL students thought that the current in-class English learning and teaching failed to provide them with appropriate learning materials that suited

their individual learning situation, nor met their varied learning purposes (see Table 5.3). Chinese university EFL students usually have different language learning experiences, leading to different language abilities (Cortazzi & Jin, 1996). However, current assigned language learning materials for English courses in Chinese universities are universal for all EFL students (Yu & Wang, 2009), without considering their personal needs and current language levels. It “ignored students’ different language levels and education background” (Aaron: 11 May 2016). Traditional learning materials without taking students’ individual ZPD into consideration could not meet the increasing requirements of EFL students for language development (David: 11 May 2016).

The Internet was believed to make changes to the current learning, making the learning lie within EFL student’s individual ZPD. Participants believed that they could “tailor” their personal learning, which allowed for appropriate difficulty (see 6.1.1; 6.2.3). They did not worry that their learning contents were “either too difficult or too easy” (see Table 5.2). EFL students believed that they could “enjoy essential improvement” (Zoe: 12 May 2016) through online learning within ZPD. It enabled them to learn in a more personalized context (Chaiklin, 2003), by using “appropriate materials that best suit my current levels” (Lydia: 11 May 2016).

6.4.2 Resources of EFL learning

Compared with traditional learning materials, such as paper-based textbooks and dictionaries, multimedia EFL learning resources were believed to be a learning tool that was “of more merits” (David: 11 May 2016) for students’ language learning, particularly in an autonomous context. Participants indicated their learning would be enhanced through this type of learning materials (see Table 5.15). Multimedia were accepted as a positive and attractive form of learning resources for improving language awareness and skill build-up (e.g., Canning-Wilson & Wallace, 2000; Hayati & Mohmedi, 2009; Hwang & Huang, 2011; Yukel & Tanriverdi, 2009).

Multimedia-supported language learning was believed to create an engaging learning environment and make the learning process interesting (Yuan & Shen, 2014), in which students could learn EFL “for a longer time” (Aaron: 11 May 2016). In practice, multimedia-supported language learning was widely employed by many EFL students for improving their English language knowledge and abilities in their leisure time (Flora: 18 May 2016). EFL students treated it as a preferred approach of their language practice (see Table 5.15). Consistent with previous indications (e.g., Astleitner & Wiesner, 2004; Shuell & Farber, 2001; Yarbrough, 2001), multimedia-supported language learning has been accepted as an attractive approach that could arouse learners’ learning interest, and enable them to learn with materials that lie within their ZPD.

Multimedia resources were believed to be beneficial to autonomous learners. Autonomous students actively “sought appropriate learning resources from the Internet” (Ken: 12 May 2016), a major form of which were multimedia ones, instead of waiting for teachers’ assignments passively as they used to do (Nosratinia & Zaker, 2014). They could intentionally construct their knowledge by employing these learning resources to serve their individual needs and interest in accordance with their current language abilities and learning needs (Chan, 2003; Kember, 1997). In this light, multimedia-supported language learning played a key role in promoting the merger of ICTs and language learning, and provided students with a learning context for their actual language development (Mohammadi & Ramezani, 2017; Zhong & Shen, 2002).

Many EFL students explicitly expressed their dislike of the traditional forms of learning materials, which were “even older than me” (Monica: 12 May 2016). Traditional EFL learning materials in China’s schools, colleges and universities have remained unchanged for many years (Li, 2010; Luo & Gong, 2015). These materials might leave behind some biases in learning and teaching, and impose negative impacts on students’ language development, as previous studies have suggested (e.g., Criado Sánchez & Sánchez Pérez, 2009; Johansson & Malmsjö, 2009). EFL students did not believe such materials could facilitate their language development, nor their academic improvement, in a society that was “experiencing significant changes” (Susan: 12 May 2016).

Multimedia provided EFL students with new learning contents that were “up to date” and “updated regularly” (Zoe: 12 May 2016). Participants agreed that learning with these materials, “particularly those coming from the Internet”, could benefit their language development “with enjoyable learning experiences” (Lydia: 11 May 2016). Compared with traditional paper-based learning materials, new learning resources were perceived to provide actual training in their language development (see Figure 5.1). This form of materials could act as a good carrier of new contents of EFL learning materials in an online context (Jolliffe, Ritter, & Stevens, 2012; Wu, 2005). It brought about linguistic knowledge for students’ learning, and also aroused students’ interest for autonomous learning activities (Kelsen, 2009).

This study noted that online multimedia resources provided students with the convenience to obtain up-to-date contents, which was “hardly achieved through textbooks” (Roy: 19 May 2016). For example, reading English news was many students’ choice for autonomous learning, and many of them did this via the Internet regularly. Participants believed it was helpful for language development. These materials were employed as a routine for Chinese university EFL students to “expand my horizons” (Zoe: 12 May 2016) that enabled them to achieve a higher level of EFL development within the range of their ZPD.

Except from new learning contents, authentic materials were perceived to be “better presented” in the form of multimedia when learning EFL on the Internet, which could hardly be presented via traditional paper-based materials, as indicated by students (Susan: 12 May 2016). Multimedia resources are naturally suitable for providing authentic information for students’ EFL learning (Garrett, 2009). A wide range of studies have noticed the effects of authentic multimedia materials on the development of EFL students’ language skills and knowledge development (e.g., Al-Jarf, 2004; Mayora, 2009; Hwang, 2005; King, 2002; Lin & Chen, 2007; Nahavandi, 2011; Riazi & Rezaii, 2011; Sun & Chang, 2012).

After a long time of learning in the classroom, where test-oriented learning and teaching was dominant, Chinese university EFL students were historically thought to focus heavily on linguistic knowledge and skill promotion by using pedagogical and tutorial materials, while they usually ignored the development of cultural awareness and communication skill through authentic materials (Gan & Humphreys, 2004; Yu & Wang, 2009). However, the present study makes a different voice. It was found that Chinese EFL students preferred learning contents that “were produced, presented, and originally provided for English-speaking students” (Flora: 11 May 2016). These materials in students’ autonomous online language learning were expected to expand the learning boundary and enabled students to develop their language abilities in a well-rounded way.

In this study, EFL students indicated that “authentic multimedia materials were easily obtained via the Internet” (Susan: 12 May 2016). The online learning environment was used as “one of the major sources” for them to obtain authentic materials, such as English news and movies (Tina: 12 May 2016). The current developmental trend of integrative CALL focuses on the incorporation of authentic multimedia resources in language learning (Alhababi, 2017; Finley, 2017). It was argued that authentic materials could be presented in the form of multimedia, and be conveniently accessed by EFL students in a CALL context.

The study also noticed that online EFL learning was also “a better carrier” for authentic multimedia materials than paper-based textbooks, as it was “suitable for presenting images and audios at the same time” (Roy: 18 May 2016). It benefited language learning by helping internalize targeted language and linguistic knowledge through authentic materials (Brett, 1997). Participants indicated in the study that they would actively employ English news, TV series and movies, audios and music, games, and other types of authentic materials for their language development in an autonomous learning context. The integration of authentic multimedia learning materials and autonomous online learning was “a success” to help them achieve “more positive results” (Julia: 11 May 2016) in their ZPDs for language development, which also has received echoes in existing literatures (e.g., Benson & Voller, 2014; Cotterall, 2000; Ho & Crookall, 1995).

Previous thinking suggested English teachers not provide EFL students with many authentic materials in the classroom, since authenticity of materials might lead EFL students “to feel frustrated, confused, and, more importantly, demotivated” (Guariento & Morley, 2001, p. 348). Authentic materials could be difficult for some EFL students as well (Skehan, 1998). Therefore, some English teachers might not use authentic materials for teaching in the classroom. Participants noticed that “intentional avoidance of authentic learning materials” (Tina: 12 May 2016) existed in their traditional learning. Furthermore, as the traditional learning approach focused heavily on language tests (see 6.2.2), teachers employed less authentic materials in the classroom, as these materials did not directly help students obtain high scores. In-class English learning and teaching was considered to “limit my access to authentic resources” (Lydia: 11 May 2016), which was also in line with findings from empirical studies that focused on China (Su, 2011; Zhao, 2005).

However, as found in this study, these Chinese EFL students were not limited by their learning experience that prevented them from using authentic materials. Instead, they displayed the willingness to employ authentic ones from the Internet in autonomous learning. It seemed that these EFL students did not rely completely on teachers in the classroom for learning, but found themselves additional resources to “make a supplement to” their in-class learning (Alice: 19 May 2016). By employing these resources in language learning, EFL students also perceived that they achieved a higher level of language development in “a wider range” (Monica: 12 May 2016) of

their ZPDs, rather than being limited by the textbooks. It indicated an elevation of autonomy in an online environment, where students could have more control, as well as increasing motivation to engage in learning (Benson, 2006; Tayjasanant & Suraratdecha, 2016).

The online environment was believed to promote the autonomy and independence in language learning. It “freed” students from a small context, and enabled them to engage in learning in a broader learning context (Julia: 11 May 2016). The online space was widely recognized by Chinese EFL students as “a big resource pool” (Clark: 12 May 2016) for language learning, from which students could select the best suited resources to serve their language learning in their individual ZPD. Existing studies have also confirmed the online learning as a supplement to students’ traditional EFL learning and teaching (e.g., Al-Jarf, 2005; Tseng & Liou, 2006). It provided a means for them to obtain “what I could not have in the classroom” (Eric: 12 May 2016) to broaden their learning beyond the traditional setting into an autonomous context.

It is worthy of notice that EFL education in China is unbalanced in different regions, particularly between the western developing regions and the eastern developed ones (Yuan, 2011). Students in those less-developed regions might lack access to qualified materials via traditional methods (Hu, 2003), “particularly to those authentic materials” (Adam: 12 May 2016). Traditional EFL learning and teaching

cannot fulfil students' needs of abundant authentic materials in EFL learning in those regions.

Online EFL learning provided a way to help erase the barrier and enabled all EFL students in different regions to have an equal opportunity for language learning, rather than just students “who happened to study in a developed region” (Kent: 18 May 2016; Susan: 12 May 2016). As discussed in 6.1.1, online EFL learning enabled students to access learning resources, including authentic ones, with less physical limits (Reich, Murnane, & Willett, 2012). It could meet EFL students' needs of learning resources in a wider range, as well as a way to promote “education equity” (Kent: 18 May 2016).

6.4.3 Challenges in EFL learning

Regarding the selection and employment of multimedia resources, it was not always smooth and successful. Not all participants in this study could find out the appropriate learning resources that existed within their individual language learning. Instead, some challenges were also spotted to remain as concerns of these participants in their EFL learning in this study. Two main issues were information redundancy and distraction.

It was found that information redundancy was one of the major challenges faced by EFL students. Almost all students in the focus groups agreed that the Internet had many mistakes. Online learning, according to some students, might bring about

“unreliable, or even mistaken materials for language practice” (Alice: 19 May 2016). Distinguishing qualified learning resources from unreliable or less useful ones was a prior issue for autonomous language learning (Helwa, 2016; Valdez, Tan, & Ng-Tan, 2017). EFL students of this study perceived that online learning contents were “over-abundant”, which was demanding for them to work out “essentially beneficial ones” (Flora: 11 May 2016) for language practice. It may create some barriers for autonomous learning (Gilakjani, 2012), since language learners might be insufficient in experience and abilities with selection of materials (Lee, 2017; March, 2007). This point has been also noticed in existing studies (e.g., Finch, 2013; Goh & Aryadoust, 2015; Lak, Soleimani, & Parvaneh, 2017).

For these EFL students, the advantage of online learning that it provided abundant choices of learning resources (see Figure 5.7) became a challenge in an autonomous context. In the past time, information selection was done by English teachers in the classroom in China (Zhang, 2017). Chinese EFL students just needed to “follow teachers’ instructions without any consideration” (Eric: 12 May 2016) for learning organization. Many participants in the study admitted that they “never doubted the usefulness of a teacher’s selection, nor questioned its appropriateness for me” (Roy: 18 May 2016). In a teacher-centred learning context, the student’s autonomous exercise was largely compromised, leading to possible obstacles to frame the selection of learning materials in their individual ZPD now on the Internet.

Another challenge related to learning resources faced by EFL students in online EFL learning was distraction (see Figure 5.5). Empirical studies have suggested that multimedia learning materials may distract students' learning attention (e.g., Kim & Gilman, 2008; Nguyen, 2009). Students suffered from "wandering in the virtual world" when using multimedia resources on the Internet, as they were "offered overwhelming information" (Eric: 12 May 2016). For some students, interesting multimedia contents might not be employed for learning purposes. Distraction has become one of the major problems for EFL students' online language learning (see 6.1.2; 6.2.4; 6.3.3). They were found to rely on other-regulation for language learning, particularly in a multimedia-supported context, rather than being self-regulated.

In the multimedia-supported language learning context, EFL students' learning attention was attracted by the forms of materials, "such as music and colourful images" (Alice: 19 May 2016), rather than learning itself. Multimedia materials for language learning "naturally have the potentiality for distraction" (Bejar et al., 2000). MacWilliam (1986) argued that multimedia materials' visual elements might disrupt students' language input, and then impede their comprehension of L2. Being distracted by multimedia materials in autonomous language learning might negatively impact EFL students' language development.

Although empirical studies have suggested that multimedia learning materials, particularly those within students' ZPDs, can attract students' attention in EFL

learning, rather than distract them (e.g., Hu & Deng, 2007; Hwang & Huang, 2010; Gilakjani, 2012; Marzban, 2011), it was found from this study that distraction by multimedia resources in autonomous online learning stayed as one of the major challenges for many of these Chinese university EFL students (see Figure 5.5). It seemed that these participants were not autonomous for self-regulated learning yet, being other-regulated in online learning (see 6.2.4). For these students, who were currently “lower degree autonomous learners” (Littlewood, 1999) and “not good at self-control” (Alice: 19 May 2016), measures should be adopted to cope with the distraction due to the employment of multimedia resources, particularly in a resource-rich context (Bani-Hani, Al-Sobh, & Abu-Melhim, 2014; Richards, 2005).

It was summarized that Chinese university EFL students believed that they could learn a foreign language within the range of their ZPDs with the support of ICTs, by employing appropriate learning resources. Students displayed preferences of new and authentic materials in online language learning, which could be presented in the form of multimedia. They believed these materials could help them achieve a higher level of language development within the range of their ZPDs. Some challenges were also concerned by these students. Information redundancy and distraction of learning materials were two outstanding factors. EFL students’ selection, organization, employment and review of learning materials within their individual ZPD in autonomous online learning will be discussed in 7.4. Their learning strategies in terms

of multimedia resources, and measures to cope with challenges in learning practice, will also be investigated.

6.5 Perceptions of scaffolding

6.5.1 Benefits of scaffolding

Scaffolding was accepted by participants of this study as a necessary learning tool. They indicated that they would “actively seek scaffolding” (Mike: 18 May 2016) for supporting their online autonomous language learning. It seemed that EFL students were aware of the role scaffolding played in their language practices, which was to assist them to obtain a higher level of learning outcomes within their ZPDs by overcoming limitations (Ahangari, Hejazi, & Razmjou, 2014; Cole, 2006; Liu, 2018; Nguyen, 2013). Employing scaffolding was described as “a must” for EFL students’ autonomous learning (Susan: 12 May 2016).

The study found that scaffolding “provided straightforward assistance” (Gloria: 18 May 2016) to the achievement of learning goals. It bridged the gap between what EFL students could do and what they could not do independently (Gillies & Boyle, 2005); otherwise, “I might not be able to complete learning tasks all on my own” (Roy: 18 May 2016). It has been widely recognized as an important resource for supporting language learning, particularly in an online context (e.g., Rezvani, Saeidi, & Behnam, 2015; Santoso, 2008; Zoreda & Vivaldo-Lima, 2008). Students’

purposeful employment of scaffolding in their learning practice was expected to address specific questions (Ellis, 2004).

A change regarding scaffolding in students' EFL learning was noted in this study. In the classroom, EFL students were traditionally passive as receivers of scaffolding (see Figure 5.13). They "received and used scaffolding as the teacher required" (Susan: 12 May 2016). Students in an autonomous learning context "always sought scaffolding actively" (Bob: 12 May 2016). This group of EFL students were found to change from a passive receiver of scaffolding from teachers in the classroom, to an active scaffolding seeker in autonomous learning. In this process, it gradually shifted the learning responsibilities from teachers to student themselves (Veerappan, Suan, & Sulaiman, 2011). Learner autonomy was elevated in this change, and EFL students became more active in knowledge construction as well (Holec, 1981).

6.5.2 Soft scaffolding

Different from previous indications that teachers were usually absent from students' online language learning (e.g., Hou, Chang, & Sung, 2007; Tsai, 2010; Weinberger, Stegmann, & Fischer, 2010), making the learning more self-instructive (Dickinson, 1987; Jones, 2003), this study discovered that teachers were a major source of scaffolding for the learning in an online context. EFL students expressed their expectations of seeking guides and instructions from teachers, and believed teachers played a necessary role in language learning (see Figure 5.14). They claimed

that they preferred “teachers’ instructions” (Bob: 12 May 2016) in their online language learning. Teacher scaffolding was perceived to be “reliable and trustworthy” (Susan: 12 May 2016).

It was found that teacher scaffolding enabled EFL students to have “essential assistance”, as teacher scaffolding could “precisely target my learning” (Roy: 18 May 2016). EFL students indicated that it was their English teachers “who knew my learning well” (Bob: 12 May 2016), and who could provide “more effective assistance” to their learning than others (David: 11 May 2016). Teachers commonly act as one of the major sources of scaffolding in EFL learning and teaching (Davis & Miyake, 2004; Jang, Reeve, & Deci, 2010). They helped EFL students think critically about their learning from a bigger picture through teacher reflections and responses to their requests (Rivers, 2001; Schwienhorst, 2003). Therefore, many participants agreed that the role the teacher played in autonomous language learning could not be easily replaced (see Figure 5.14).

As suggested by previous studies (e.g., Gu, 2003; Yan & Horwitz, 2008), Chinese EFL students were usually kept learning individually. It was always their English teachers who provided scaffolding in the learning process (Wang & Dong, 2013; Zhang, 2014). Peer scaffolding was “prohibited” as teachers intended to prevent students from copying others’ work (Susan: 12 May 2016). It was noticed that many teachers believed that keeping students learning individually was a way to help

students gain independence in learning. On this basis, teachers would be less likely to provide opportunities for peer scaffolding. Therefore, scholars have assumed that Chinese university EFL students might be less likely to experience, or have a positive perception of peer scaffolding (e.g., Li; 2009; Lin, 2015; Yu, 2014).

However, the current study had a different finding that participants recognized peer scaffolding as a positive strategy for language development, and displayed their interest in engaging in this type of scaffolding activities. Peer scaffolding was not treated inferior to other sources of assistance; instead, it was “as effective as” teacher scaffolding “for most of the time” (David: 11 May 2016). It was also a “preferred” (Emily: 12 May 2016) source for scaffolding in the learning practice, as participants indicated in the study.

Peer scaffolding was believed to promote “mutual benefits” that were “good for both assistance providers and receivers” (Bob: 12 May 2016). It emphasized the role that interaction plays in the SCT framework for language development (Rahimi & Tahmasebi, 2010). Such interaction should be the base for cognition growth and language development (Lipponen, 2002). Students’ uses of scaffolding stressed the significance of placing autonomous language learning into a sociocultural context, where they could essentially construct language knowledge through intentional interaction with both teachers and peers.

It was noted that peer scaffolding was preferred by EFL students. In a collectivist society, Chinese EFL students usually treat their teacher as an authority (Peng, 2012). The unequal status between students and teachers might impede the communication and interaction (Julia: 11 May 2016). Peer scaffolding involved all participants with equal social status (Esfandiari & Myford, 2013; Zhao, 2010). It allowed them to learn English language “in a more casual environment” (Betty: 19 May 2016). They perceived peer scaffolding to be “easier to accept”, and they had “less concerns” (Julia: 11 May 2016), while teacher scaffolding often led to psychological burdens (Ming & Qiang, 2017).

The study also found that peer scaffolding benefited language learning by providing an opportunity for students to make their personal views heard. Personal view-making is meaningful to language knowledge construction and development in autonomous learning, as well as encouraging more peers to engage in learning (Barab & Duffy, 2000; Vurdien, 2011). As EFL students indicated in the study, peer scaffolding created a space for them to communicate with each other, where they could “present my personal views” (Eric: 12 May 2016). It reflected the need of students to be involved in social communication and interaction, in which they always had the enthusiasm to “speak my voice” (Kent: 18 May 2016), and to obtain responses from peers (Yang, Yeh, & Wong, 2010). Peer scaffolded made it available, and fulfilled their needs by providing an equal opportunity to interact with others. Therefore, it was expected to be incorporated into students’ language learning.

6.5.3 Hard scaffolding

Besides soft scaffolding from teachers and peers, hard scaffolding, the “static support that can be anticipated and planned in advance” (Brush & Saye, 2002, p. 2), was perceived to be of importance for EFL students’ autonomous online learning as well. In language learning, hard scaffolding consists of materials in various shapes, including notes, references, extending information and explanations, aiming at building student’ linguistics knowledge and language abilities from different angles (Kao, Lehman, & Cennamo, 1996; Mardijono, 2012). It is expected to develop students’ abilities and knowledge to a target degree within their ZPD from a lower level gradually (Ningrum, 2015; Opperman, 2016; Rezaee & Marefat, 2015).

It was found that hard scaffolding was conveniently accessible (Aaron: 11 May 2016), “particularly in an online environment”. It was described as “a handy support”, which EFL students could make use of “at any time during the learning process” (Roy: 18 May 2016). It showed that hard scaffolding faced all students by providing common support for their general learning needs (Oliver & Hannafin, 2000). As hard scaffolding could be embedded within multimedia learning materials, contributing to language development jointly with other resources (Hayati & Ziyaeimehr, 2011), it provided a “consistent, basic level of support” to students’ language development (Sharma & Hannafin, 2007: p. 39).

Participants of this study felt hard scaffolding to be “appropriate” for their autonomous learning, as it “provided assistance without harming my own learning endeavours” (Lydia: 11 May 2016). They were also “more flexible” (Olivia: 11 May 2016) than seeking people’s assistance. With hard scaffolding, students could learn in a “safe but challenging environment” (van Lier, 2004: p. 196), as a beneficial factor for language development. Therefore, supportive and anticipated hard scaffolding could provide more thinking space for students, before they seek teachers’ or peers’ on-demand responses (Brush & Saye, 2000). It “allowed me to further develop language abilities independently” (Roy: 18 May 2016). It supported students’ constant language development (Weinstein & Preiss, 2017), and it was believed to fit autonomous language learning of Chinese university EFL students.

This study found that participants had awareness of the importance and functions of scaffolding, which usually came from teachers, peers, and instructive materials in their learning practice, for their autonomous EFL learning, particularly in an online context. They had positive perceptions of scaffolding in their EFL learning process, and expected scaffolding could be incorporated to facilitate their autonomous learning. Students’ selection, organization and employment of scaffolding to support their EFL learning will be further discussed in section 7.5.

6.6 Chapter summary

This chapter reported discussions on findings of Research Question 1 of this thesis: What are Chinese university EFL students' perceptions of learning EFL in an online interactive context? Findings were discussed from five perspectives students' perceptions: the CALL context, autonomous EFL learning, interactive learning, ZPD and learning resources, and scaffolding.

This study indicated that Chinese university EFL students had positive perceptions of autonomous online language learning. They had confidence in their abilities in autonomous EFL learning, and displayed some degrees of autonomy in finding appropriate learning materials and scaffolded resources to best suit their current language levels and learning needs within their individual ZPD. Students' perceptions of online interactive EFL learning was also positive. They showed their preferences for different types of learning resources in interactive learning as well. However, they still had some concerns in online interactive EFL learning. Their experience of traditional in-class language learning had also influenced on their learning in the new CALL context. The next chapter will discuss student participants' online EFL learning practice.

Chapter 7 Discussion: Students' engagement in online EFL learning

Chapter 6 discussed findings regarding Chinese university EFL students' perceptions of EFL learning in a CALL context. Students' expectations, perceived benefits, as well as the challenges in terms of the use of online language learning and multimedia resources were discussed.

This chapter discusses findings in terms of Research Question 2 of the present study: How does this group of students learn EFL via an online interactive learning platform? Participants' engagement, their adopted learning strategies, as well as their measures to cope with challenges and obstacles in autonomous online EFL learning are investigated through four theoretical constructs. These findings are discussed with reference to relevant literature and theories as well.

7.1 Engagement in online EFL learning

7.1.1 Learning time

It is meaningful to examine students' time spent on language learning, as it reveals their attitudes towards a certain learning method, as well as the features of the learning approach (Noytim, 2010; Sholdt, 2013). This study discovered that participants preferred to use their weekdays for EFL learning, and liked to make use of fragmented time for language learning. To a certain degree, this finding displayed their attitudes towards autonomous online English learning.

Previous studies have argued that autonomous online English learning is a different approach from its traditional in-class counterpart (e.g., Alshammari & Parkes, 2017; Condie & Livingston, 2007; Hung et al., 2010; Zhang et al., 2004). Considering from time investment, online EFL learning is not treated as a part of the formal “educational frameworks” (Toffoli & Sockett, 2015). Across the world, in-class learning and teaching, using paper-based textbooks as major learning tools, is accepted as the formal way for language education, while the online type is recognized as an informal way (Wong & Looi, 2010; Wu, Yen, & Marek, 2011).

However, different findings were seen in the present study, and the boundary of the two learning approaches was gradually blurring among Chinese university EFL students. Participants treated online EFL learning as a part of their formal language training. It was reported that they viewed online language learning with “a very serious attitude” (Chloe: 19 May 2016). Participants’ online learning usually occurred in weekdays, which was “typical for academic learning” (Betty: 19 May 2016). They framed the online learning into the formal educational setting, and employed it as “a routine” (Alice: 19 May 2016) for language development. The gap between online language learning and formal language education is not significant as a previous study indicated (Hong-Nam & Leavell, 2007).

Online language learning is no longer a trial, but a workable approach that has been put into practice in a Chinese university context. With accessible equipment for online language learning and students' increasing autonomy, online EFL learning has been incorporated into the educational setting of EFL students' formal language learning in the university, instead of a different and separated approach from the in-class one. From students' perspectives, the new learning approach was viewed as a way to develop their language abilities. They did not limit themselves within an in-class range, but expanded their EFL learning to a broader online context. The online learning was "a routine learning approach" that had "no essential difference from English courses" (Chloe: 19 May 2016) for their language knowledge and ability improvement.

Although participants treated online EFL learning as a formal approach, the priority of this learning approach was found to be relatively low. Quite a few participants in the present study indicated that they would learn English on the platform only when they had completed all other learning tasks, particularly those "teacher assigned ones" (Frank: May 11, 2016). This finding resonated with previous indications that EFL learning with digital devices and the Internet only enjoyed limited priority among students, particularly in a Chinese educational context (e.g., Picciano & Seaman, 2009; Twigg, 2003; Zhang et al., 2004).

The study found that, at this stage, online language learning was believed not to replace in-class English learning (Aaron: 11 May 2016). After a long time learning with paper-based materials in the classroom (Hu, 2005; You, 2004), Chinese university EFL students used online learning more as a supplement to their traditional in-class learning (Shen & Suwanthep, 2011). It was more like an effective learning tool that enabled EFL students to “better digest” the information they obtained from their English courses (David: 11 May 2016). Participants’ choices in this study indicated that CALL and online language learning were still at their early developing stage in a Chinese university context (Wang & Motteram, 2006). EFL students now have abundant choices for their language improvement, both in the classroom and after class (Wan, 2016). It may be in need of further studies and investigations in order to better the CALL as a routine and formal learning approach, which hopefully benefits a wider range of language students (Ellen & Seaman, 2007).

Since EFL students usually worked on autonomous online learning after the completion of their other learning tasks, the value of fragmented time was realized. As observed from this study, participants actively employed fragmented time for autonomous online EFL learning. They indicated that they preferred “short-time practices” (Flora: 11 May 2016) in an online context. They would like to control their learning time “within half an hour” (Roy: 18 May 2016) for each phase of learning. In practice, this group of participants were observed to perform their learning several times to complete one learning module, while each phase of learning only lasted for a

short time period (average 15 to 30 minutes). It was typical fragmented-time language learning, which was commonly seen in an online context (Qiang, 2013; Wang, 2015)

Fragmented-time learning was also employed by these EFL students as a strategy to deal with learning distraction. Distraction remained an issue for their online learning (see 6.1.1 & 6.1.2). It was not easy for EFL students to draw their attention on one specific thing for a long time (David: 11 May 2016). Distraction occurred in the long-time learning, interrupted students' learning activities, and impeded their learning outcomes. By dividing their learning to short periods, participants could "ensure my focus" (Roy: 18 May 2016) on learning activities. Employment of fragmented time for autonomous online language learning is often seen as participants' active countermeasures against the learning obstacle of distraction (Appana, 2008; Kilpatrick & Bound, 2003; Kruse, 2004).

Fragmented-time learning also benefited participants' learner autonomy, who reported to enjoy "a sense of self control" (Tina: 12 May 2016) in the CALL context. Chinese university EFL students showed the sign to "be independent" (Alice: 19 May 2016), and demonstrated their abilities in planning their learning and in coping with challenges as autonomous learners. As showed in this study, they were no longer passive knowledge receivers in language learning by following the teacher's arrangement blindly, but actively engaging in a complex learning situation to deal with learning-related problems by adopting appropriate learning strategies (Betts,

2004). Fragmented-time learning is considered as one of the most significant features and benefits of online learning (Hu, 2013).

7.1.2 Learning environment

Besides the learning time, students' choices of the learning environment were also of strong personal features. It was noted in this study that Chinese university EFL students chose a habituated environment for learning activities, mainly in dormitory rooms and in the library (Flora: 11 May 2016; Tina: 12 May 2016; see Table 5.2). By employing ICTs for language learning, the learning environment EFL students chose was different from that of the traditional learning. Chinese university EFL students' traditionally study English in the classroom (Rao, 1996). However, they claimed learning in the classroom was "not comfortable" (David: 11 May 2016); while online learning made it possible for EFL students to engage in language development in an enjoyable environment (Peterson, 2006; 2012). Compared with the classroom, those preferred locations were students' "priority choices" (Tina: 12 May 2016). Learning environment usually has deep impact on students' autonomous learning performance and outcomes (Dang, 2010; Lizzio, Wilson, & Simons, 2002; Wang et al., 2009). Learning in a preferred environment might lead to positive learning experiences and productive learning outcomes.

This reflected that learning in an online context encouraged these EFL students to actively construct their personal learning ecologies regarding time investment and

learning environment on the base of their individual learning situations (Lai, 2017). Rather than being strictly controlled by teachers or relying on teachers (Trent, 2008), Chinese university EFL students were striving to become higher degree autonomous learners in learning (Littlewood, 1999), as well as to progress to higher stages of autonomy (Littlewood, 1996), through “beginning to make decisions on small issues” (Lydia: 11 May 2016) in learning with the support of modern ICTs, such as time investment and environment.

Furthermore, when provided a student-centred EFL learning platform, participants of this study described their experience of autonomous learning as attractive, impressive, and enjoyable (Olivia: 11 May 2016). As a student indicated that she would “very possibly insist on future language learning on the computers” (Zoe: 12 May 2016), online EFL learning not only promoted their autonomy in current language learning, but also helped cultivate them as lifelong language learners (Donato, 2000). Considering from this perspective, autonomous online learning went beyond the boundary of short-term language development. It provided a way for ordinary students to focus on their long-term development, which could be treated as an extension of the traditional in-class language learning.

7.1.3 CALL in the classroom

It was noted in the study that modern ICTs do not necessarily lead to successful autonomous language learning. Computers and the Internet had been introduced into

EFL classrooms for a long period of time in China (Hu & McGrath, 2011).

Participants mentioned that they had used computers and projectors for EFL courses for many years. However, digital devices did not make essential changes to their traditional teacher-dominant EFL learning, nor bring about innovations to the lecture-based teaching, but only made the textbooks electronic. They were just used to “present traditional learning contents” (Lydia: 11 May 2016; Tina: 12 May 2016).

Therefore, the study argues that using digital devices and resources for EFL learning and teaching is only half-way from satisfying learning outcomes and experience. Creating student-centred learning contents and intercultural awareness, and incorporating them into an autonomous learning context that lets students take control of their learning, are key factors to fulfil students’ individualized learning needs in EFL education.

This part discusses issues related to online EFL learning practice, particularly students’ time investment and preferred learning environment, for providing a picture of their engagement in online learning, and revealing their attitudes towards online EFL learning. Online EFL learning had been accepted by Chinese university EFL students as a routine way for productive language development after class. EFL students were willing to invest time into online learning in their leisure time. However, it could not replace the formal language education, nor serve as a priority approach for language development at this stage in a Chinese university context.

7.2 Engagement in autonomous EFL learning

7.2.1 Autonomous EFL learning

It was noted that, as autonomous EFL learners, Chinese university EFL students had the motivation to develop their current language levels via various means, including the traditional one and the new online one. When they found their previous learning was “insufficient” to equip them with enough English language knowledge and skills “to meet the increasing requirements of English in the college and in society” (Eric: 12 May 2016), they autonomously engaged in self-imitative and self-regulated learning (see Table 5.6). In line with previous indications that autonomous learning is an effective way to develop language levels (e.g., Apple & Shimo, 2004; Lo, 2010; Ryan, 2000), participants of the study accepted it as “a routine way” (Roy: 18 May 2016) by “most university students” (Gloria: 18 May 2016) in the university for language development.

As data showed, for most university students, autonomous EFL learning had been accepted and served as a major approach for them to develop their language abilities and knowledge. As reported in this study, after class, students employed a wide range of resources to support their EFL learning, including online EFL learning websites, mobile phone apps, newspaper, books, movies and games. It appeared that university EFL students were not limited to an in-class learning context, but expanded their language learning and practice in a wider context. Their EFL learning was not entirely

dependent on teacher instructions either. EFL students had certain degree of autonomy in EFL learning, and actively sought learning resources and opportunities to further develop their language levels.

Besides learning resources, participants also engaged in autonomous EFL learning in various ways. It was noticed that autonomous EFL learning was not a simple repetition of their in-class English courses, nor a continuation of the teacher-lectured mode. Instead, they selected and adopted different ways of learning that best suited their individual language proficiency level, and catered for their own learning needs. For example, a student who “wanted to obtain high scores in language tests” (David: 11 May 2016) found many test-oriented trainings for himself after class, while his peer student, who intended to “have good communication abilities” (Lydia: 11 May 2016), chose to follow up English videos to better her speaking skill. These findings suggested that student participants showed the sign as autonomous language learners, who built their individual learning ecologies through expanding their EFL learning to a broader range (Lai, 2017). In this autonomous context, EFL students were able to frame the learning into their individual ZPD, and attempted to achieve better goals in language learning (Khaliliaqdam, 2014).

Furthermore, it was also indicated that students’ employment of autonomous language learning encouraged them to focus on their “long-term language development” (Lydia: 11 May 2016). It motivated these students to become “lifelong”

language learners (see Table 5.5). The learning reflected the aim of language education to nurture EFL students' language learning abilities, and to cultivate them as lifelong autonomous learners (Donato, 2000). As more autonomous learners, they were more likely to pursue further development in EFL learning (Kötter, 2001; Murphy, 2007). Eventually, these students expected autonomous learning to benefit their intellectual development "in a well-rounded way" (Eric: 12 May 2016), which was also a response to the advocacy made by the Chinese government (MoE, 2007).

7.2.2 Learning styles

An autonomous language learner usually takes responsibility by making decisions on learning-related issues (Garrison & Archer, 2000; Littlewood, 1996). Besides learning planning, monitoring, evaluating, and organizing learning resources (Holec, 1985; see 6.1.2), the learning style and learning strategy that can be used to cope with their individual learning situations are also key parts for students' consideration (Little, 2001). This part discusses students' learning styles, while the learning strategies they adopted in online learning will be discussed in 7.3 and 7.4.

As found from this study, a solitary learning style was widely adopted for autonomous EFL learning via the Internet. Although most of these participants learned EFL on the provided platform in a similar time period (on weekdays), they rarely gathered together for learning. It was not common for them to cooperate with peers in the autonomous online learning for learning tasks, nor to interact or

communicate with others for the learning contents either. Instead, they learned English via the Internet “in private”, “all by myself” (Tina: 12 May 2016; Susan: 12 May 2016). Investigation revealed reasons for students’ solitary learning style in autonomous online EFL learning, which were: traditional impacts, a lack of language confidence, and concerns of distraction.

It was found that Chinese university EFL students employed a solitary learning style under the influence of their traditional learning. In a traditional in-class EFL learning context, English teachers in China usually suggested students work individually to prevent them from copying others’ work (see 6.1.5), and to cultivate their “independence in language learning” (Carl: 11 May 2016). After learning EFL in the context for a long time (see Table 5.1), Chinese EFL students were accustomed to the requirements in the classroom, where non-communicative learning activities were widely employed (Rao, 2002). Some students might take individual learning as “the only correct way” for EFL learning, and treated interaction and cooperation as “a misconduct” (Flora: 11 May 2016). However, these students ignored the potential positive influence of peer interaction and communication in EFL learning, such as de-escalating anxiety, improving confidence, enhancing motivation and increasing engagement, which have been confirmed by empirical studies (e.g., Kyriacou & Zhu, 2008; Kurt & Atay, 2007; Lamb, 2007; Lan, Sung, & Chang, 2007; Min, 2006; Zeng & Takatsuka, 2009).

A lack of confidence in EFL abilities and communication skills was another factor for students' choice of learning style. Previous studies have suggested that students' confidence has a positive correlation with their willingness for communication and interaction in using a target language (e.g., Fallah, 2014; Naqvi & Al-Mahrooqi, 2015; Ono, Ishii, & Ohnishi, 2015). In this light, EFL students would evade from interaction and learn alone if they had low self-evaluation of their language abilities and knowledge. .

In the study, low self-evaluation widely existed among participants. Participants in this study were found to consider themselves incapable of using English language for interaction and communication purposes (Aaron: 11 May 2016; Kent: 18 May 2016). They indicated that they "were afraid of" interacting with peers and were worried about "failure of communication" in the learning process due to "currently limited" foreign language abilities (Flora: 11 May 2016). Studies have suggested that EFL students usually underestimate their current language abilities (Yamini & Tahmasebi, 2012). In a Chinese university context, EFL students seldom participated in the evaluation process of their language learning; instead, it was their teachers who were supposed to be responsible for assessment (Ma et al., 2017). This might discourage students' learning. For helping students have a clear picture of their learning and their language abilities, evaluation should have provided a room for students' engagement (Levitt, 2003). Findings in terms of evaluation in the online EFL learning will be further discussed in 7.4.

Distraction was also a concern of EFL students that made them stick to individual learning in an autonomous online context. Peer distraction is common among EFL learners, particularly in an autonomous context (Chou, 2014; Yunus, Salehi, & Chen, 2012). Concerns of distraction, particularly peer distraction (see 6.3.3), existed among Chinese university EFL students. Therefore, they adopted individual learning to avoid distraction in an autonomous learning context (Julia: 11 May 2016).

Although Chinese university EFL students seemed not to fully develop a good understanding about learning styles and strategies in an autonomous context, there is no need to be over-pessimistic. Instead, it was quite encouraging to see that participants in the study had some degree of autonomy in terms of learning materials, strategies, and scaffolding (see 6.2; 6.3), who could create their personal learning ecologies on the basis of their own learning situations (Lai, 2017). They owned the awareness of learner autonomy, and actively developed some strategies and measures to cope with challenges, including a lack of confidence, foreign language anxiety, and distraction, in online language learning.

7.2.3 Test-oriented learning

Test-oriented language learning and teaching has obtained some positive outcomes for developing students' ability in language tests (see Table 5.5; Table 5.9), which have been confirmed in previous studies (e.g., Liu & Dai, 2003; Ting & Qian,

2010). Test-oriented learning and teaching is one of the most frequently employed strategies for EFL education in China (Gu & Liu, 2005; Zhu, 2003). Learning with this strategy, EFL students mainly employ autonomous learning to prepare for various language tests, including IELTS, TOEFL, and CET-Four & Six in the university (Ma, 2002; Wang, 2011).

However, the test-oriented approach also led to Chinese university EFL students' "very complex feelings" (Kent: May 18, 2016). On the one hand, it limited their language development within a small range; that is, only on language tests, and excluded possibilities of other skill development (Lei & Qin, 2009). It left limited room for EFL students to develop their language abilities in a well-rounded way, or help them improve their intercultural awareness (Lei & Qin, 2009; Zhu, 2003). On the other hand, it was popular among EFL students, particularly in a Chinese university context (Liu & Dai, 2003; Zhu, 2003), as it "directly served a major one of our learning needs" (Chloe: 19 May 2016; see Table 5.9).

Chinese university EFL students are under academic pressures in the university (see Table 5.5), requiring them to sit various language tests and obtain high scores (Wei & Lei, 2011). It was perceived to be "too demanding" (David: 11 May 2016) for them to achieve the goal without engaging with test-oriented autonomous language learning at this stage. While students' desire to develop their language abilities and skills in a well-rounded way also existed, the conflict between EFL students'

preferred learning and the required one was observed in this study. Achieving a balance of EFL learning through their autonomous practice is a major challenge faced by Chinese university EFL students.

It should not be ignored that these Chinese university students were striving to make efforts to change the test-oriented strategy in EFL learning, particularly in some circumstances where they had the autonomy. Although they admitted in the study that autonomous language learning could be test-oriented and benefited various language tests (see Table 5.9), they preferred the non-test-oriented approach when learning online. They claimed that they would “very possibly” choose non-test-oriented language learning for language development, if they “had the autonomy” (Clark: 12 May 2016). It suggested that Chinese university EFL students attempted to enrich their language learning in a broader context, and seized the opportunity to shift to autonomous language learners, who were supposed to construct their own learning (Lai, 2017).

As reflected in their learning practice in this study, test-oriented learning tasks were limitedly used for online EFL learning. Although not many test-oriented tasks were provided on the platform for students’ autonomous learning (11 True or False tasks and 20 Cloze tasks, accounting for less than 30% of all learning tasks, see Table 5.10), participants were observed to skip these two types of tasks in their practice. Some of them also admitted in the study that they “would probably abandon the

learning”, if too many “test-like learning tasks” were presented (Gloria: 18 May 2016).

It appeared that EFL students built a connection between the learning materials and the learning approach. Students described True or False tasks and Cloze tasks as “a sign of language tests”, “symbols of teacher’s assignments”, or “formal evaluations”, instead of practices “in an autonomous context” (Alice: 19 May 2016; Betty: 19 May 2016; Tina: 12 May 2016). These types of learning resources, which were largely employed in EFL learning and teaching as assignments, in-class training, tests, and evaluations in a Chinese context, (Cortazzi & Jin, 1996; Jia et al., 2012; Wang, 1996; Wang & Geva, 2003; Zheng & Cheng, 2008), were treated as a component of language tests, leading to participants’ “unrelaxed learning experience” (Betty: 19 May 2016).

Although being under test pressures in the university, EFL students attempted to skip these tasks and made their autonomous online learning different from their traditional test-oriented learning approach. EFL students had been gradually accepting non-test-oriented autonomous English learning “as long as it was qualified for language development”, and could provide them with “authentic” learning materials (Gloria: 18 May 2016). It seemed that this group of students set their learning aims and employed corresponding resources that best suited their needs and current

language levels. From this perspective, they were taking control of their learning as autonomous learners (Dickinson, 1987).

Furthermore, participants also went beyond making decisions on surface learning issues, such as materials and tools (Garrison & Archer, 2000), but engaged with some more complex one to evaluate their learning situations and re-set adapted learning styles in the new online context. They not only took examination skills into consideration of learning, but also focused on “the overall development” (Chloe: 19 May 2016) of language abilities and skills when evaluating a certain language learning approach. Students’ perceptions of the integrative learning strategy were also seen in the previous part of the study (see 6.1.4).

On learning materials, corresponding learning strategies should be built and employed to jointly contribute to productive learning outcomes (Cohen, 2003; 2007; Grabe, 2004). In an autonomous learning context, Chinese university EFL students’ employment of individual learning and non-test-oriented learning was in accordance with their adopted learning materials. Students’ employment of learning strategy will be further discussed in a following section (see 7.4).

7.2.4 Learning materials

As found in this study, participants preferred practical learning materials to the abstract ones when learning in an autonomous online context. Although empirical

studies have noticed that EFL students actively seek and employ both practical and abstract contents to serve their autonomous language learning, particularly in a resource-rich online context (e.g., Chen, 2008; d'Eça & González, 2006; Kung, 2005; Yeh, Liou, & Li, 2007), EFL students' attitudes towards the two types of learning materials were different.

It was noted that practical learning contents were preferred by Chinese university EFL students. This type of contents could “arouse echoes in my heart” (Bob: 12 May 2016) as they enabled participants to be freed from books and bridged linguistic knowledge with the real world. It was “beneficial to both my language ability build-up and my general knowledge constructions” (Eric: 12 May 2016). It was in line with previous indications that this type of learning materials meets EFL students' practical learning purposes (Lei & Qin, 2009). Thus, they are usually employed by EFL students to develop their language abilities and knowledge in a sociocultural context (Miyazoe & Anderson, 2010).

EFL students described that by learning with practical contents, they could “put the acquired language knowledge into daily use” (Ben: 11 May 2016). For example, many interviewees in the study explicitly expressed their preference for LM2 on the provided platform. LM2 was described to be close to students' life and learning, and provided them with training on practical language knowledge, which was “useful in daily life” (Alice: 19 May 2016). Practical learning contents aroused their learning

interest and motivation through a close connection with their real life and learning experience (Kelton, 2007; Kilickaya, 2004; Li & Mao, 2008; Wang et al., 2009).

In a traditional in-class EFL learning and teaching context, both Chinese students and teachers tend to focus on linguistic knowledge and examination skills, with intentional or unintentional ignorance of putting the learning into the real world (Gan & Humphreys, 2004; Hu, 2002; Jin & Cortazzi, 2006). The Chinese government has noticed the flaws of current EFL learning and teaching, and brought up reforms to improve students' language abilities "in a well-rounded way" (MoE, 2007). However, such reform in China's EFL education is slow, leaving students with old-style abstract materials (Zheng, 2012).

While in an online learning context, EFL students were found to actively employ practical learning contents, making the learning serve different needs (see Table 5.5), such as "enhancing life experience" and "promoting general knowledge construction" (Eric: 12 May 2016) with the development of their EFL abilities. Modern ICTs provided the opportunity to foster EFL students' autonomy, and to enrich their learning in a broader context, instead of limiting them within selected educational contexts (Cotterall, 2000; Littlewood, 1999). From this perspective, these learning materials helped students engage in social interaction in the real world to express their personal meanings and to create an individualized learning ecology; that is, online

language learning helped students develop their autonomy as a person (Littlewood, 1996).

Abstract learning materials, such as those with historical and cultural contents, were not preferred or largely used by participants in their autonomous online learning. Although integrating cultural learning materials into EFL learning has been recognized as a helpful way for students' language ability development, as well as for their cultural awareness improvement (e.g., Luo, 2013; Tseng & Chao, 2012), they were still skipped by participants.

For example, participants in this study pointed out that aboriginal culture of Australia in LM3 was "a little far away from my life". These learning contents were perceived as "less useful" for students' language development, as they could "not be used in daily life, nor in language tests" (Chloe: 19 May 2016). Participants admitted that they had spent very little time on them. It reflected that abstract materials, unlike the practical ones, could hardly arouse these students' interest, nor provide them with enjoyable experiences in language learning (Tsuchiya, 2006a; Tsuchiya, 2006b; Falout & Maruyama, 2004; Kojima, 2004; Ikeno, 2002).

Meanwhile, students found this type of learning materials difficult in their language learning practice. EFL students indicated that learning with them was "obscure" (Lydia: 11 May 2016). Abstract learning contents were "hard to follow",

and could hardly arouse students' interest. Therefore, it was common for students to encounter some difficulties in learning with abstract learning contents (Cheng & Dörnyei, 2007; McKay, 2000; Van, 2009), which might lead to students' unwillingness to employ them.

It was noted in this study that participants might harm their language ability development by turning down social interaction in EFL learning. These Chinese EFL students seemed to “focus too much on linguistic skill build-up” (Alice: 19 May 2016), while their learning with abstract types of materials should be further developed. Language is “immersed in a social and cultural context” (Bakhtin, 1986), while language learning happens as a learner interacts with his or her social and cultural surroundings (Lantolf, 2000; Lantolf & Appel, 1994). In this light, their preferred learning materials usually ignored training on cross-cultural awareness and communicative skills (Gan & Humphreys, 2004; Hu, 2002; Jin & Cortazzi, 2006; Kohonen, 1992).

7.2.5 Language input and output

In terms of EFL students' learning practice, language input and output should form a complete cycle that helps the language learners raise their language abilities (Ellis, 2008). Existing studies have confirmed the benefits of input and output practices for their promotion of EFL students' language ability and knowledge (e.g., Mehdipour, 2013; Rott, Williams, & Cameron, 2002; Yaqubi et al., 2010). It is

advised to integrate both input and output, reception and production, into L2 learning and practices, which would maximize the language learning effects (Guariento & Morley, 2001). It was found from this study, however, more efforts of EFL students' autonomous learning were invested into language input practices, such as reading and listening, while output training, including writing and speaking tasks, were largely abandoned.

The use of CALL and multimedia resources was found to create a workable learning context for language learners to practice and improve their listening skill through language inputs. Participants of this study reported that their listening skill got practiced and improved in their autonomous learning on the provided platform via different learning resources, "a major one of which is videos and audios" (Betty: 19 May 2016). Multimedia learning materials were accepted by participants, and was treated as "the focus" (Carl: 11 May 2016) of their autonomous learning. The finding was consistent with their indications in the questionnaire, where this group of students displayed their strong interests in using multimedia and the Internet to improve their listening skill (see Table 5.11). It showed that EFL students were aware of the effectiveness on enhancing EFL students' listening skill and other language skills as inputs (Bajrami & Ismaili, 2016; Gowhary et al., 2015), and intentionally put them into practical use in autonomous learning.

In this study, EFL students were found to develop their reading skill via multimedia-supported learning materials and tasks. They pointed out that they had been “tired of” traditional text-based materials that were commonly used in the in-class English learning, “such as textbooks and dictionaries” (Roy: 18 May 2016), for the development of reading skill. The integration of ICTs into EFL learning and teaching provided them with an option (Lai, 2009); that is, to use multimedia for reading practice with “new experience” (Roy: 18 May 2016) (see Table 5.11).

As displayed in this study, EFL students were more willing to employ different forms of contents from their traditional in-class learning when learning online (see Table 5.8). Digital technologies allow varied forms of learning contents to be incorporated into EFL learning and teaching, providing students with different choices of learning materials for reading practice (Anderson, 2003; Leu, 2002). EFL students expected the technology-supported EFL learning to “make innovations” to EFL students’ language development (see Table 5.3), and to provide them with an enjoyable and engaging learning environment with different forms of materials (Peterson, 2006; 2012; Yuan & Shen, 2014).

The findings on students’ expectation and use of multimedia resources also shed light on the integration of technology-supported learning contents into a traditional context. Current in-class uses of these resources largely stays at the stage of displaying; that is, using computers and projectors to present electronic textbooks on

the screen (Barjis, Samarrai, & Smith, 2009; Andeweg & Kunst, 1993). Informed by the present study, it may be workable to create and employ student-centred multimedia resources in a traditional EFL learning and teaching context, allowing students to develop their language abilities and skills from multiple materials. Multimedia resources are expected to change the way students learn and practice a foreign language in a traditional in-class context (Gilakjani, 2012).

Compared with language input, EFL output training was found to be largely abandoned in students' autonomous learning. Although many of them indicated in the study that they were generally confident to improve their language output skills via online learning (see Table 5.11), they did not invest much time in the learning practice. Instead, they were observed to skip most contents in relation to language output in the learning practice.

Although previous studies have indicated that multimedia learning materials act as an ideal way for speaking skill development, which receive positive feedback from both teachers and EFL students (e.g., Hwang et al., 2016; Liu, 2016; Zhao, 2012), students are still "suffering a lack of training in speaking" (Betty: 19 May 2016). It seemed that current language learning could not fully support students to develop their speaking skill (see Table 5.11).

In their autonomous online learning practice, they neither completed those incorporated speaking training in the learning modules, nor found themselves additional materials for speaking practice. EFL students, as indicated in previous studies (Hwang et al., 2014; Yang, 2014), have limited willingness to practice their speaking skill. Furthermore, instead of verbal practices and communication, they were observed to insist on individual learning in online learning phases, and then mainly used texts for interactive English learning. They reported to invest “very little time on speaking tasks” (Susan: 12 May 2016). It led to the consequence that Chinese EFL students became “by no means good speakers”, or even “reticent learners who lack the willingness to communicate verbally” (Wen & Clement, 2003, p. 18).

Similarly, writing practice was also abandoned by many students in their autonomous online EFL learning in this study. Writing is considered as one of the “most prized” output skills for language development, particularly in academic fields (Sasaki, 2007; 2011; Zhang, 2013). It is supposed to play an important role in promoting EFL students’ language abilities and knowledge in China (Woodrow, 2011). However, Chinese EFL students are traditionally considered to be weak at writing skill (Jin & Cortazzi, 2006). In-class writing teaching focuses on grammatical and lexical correctness, ignoring students’ expression of meaning (You, 2004).

It was found that writing tasks were not EFL students’ choice in this autonomous EFL learning. They spent limited time on writing practice. Some of them even

“skipped all writing tasks” (Kent: 18 May 2016). They also reported obtaining “nothing meaningful” from writing tasks in their online learning experience.

Autonomous writing-related training, which focuses on fostering writing skill from more perspectives, such as self-expression, creativity and communication (Hanauer, 2012; Fellner & Apple, 2006; Noytim, 2010), are expected to make changes to Chinese EFL students’ low motivation of writing practice, and to encourage them to engage in learning. However, it seemed that employing autonomous writing practice into EFL learning did not change the way students developed their writing skill, nor motivate them to actively engage in writing practice.

For their unwillingness in engaging in language output trainings in the online context, it was found to result from the slow feedback of students’ endeavours in this type of learning. Language output practices, such as writing and speaking, often take a long time to arrive at substantial achievements (Wu & Zhang, 2017). It can hardly provide EFL students with “noticeable improvement” (Eric: 12 May 2016). This might demotivate their active engagement. The improvement in language skills is usually not a linear process either (Leki, 1991). For EFL students, it was slow to see their learning result in language output training, and it was hard for them to “get instant payback” (Susan: 12 May 2016) of their endeavours in language output practice. As Falout (2012) and Smith (2012) indicated, when EFL students did not see progress in a short time from their practice, they might be demotivated, and withdraw from learning practice.

Ignorance of language output in the learning process may be harmful to their language ability development and skill build-up. For EFL students, comprehensible output of their target language should be as important as language input in ability development (Swain, 1993). Autonomous online EFL learning and teaching is supposed to further optimize and make some essential changes to students' current learning, and to achieve a balanced development.

This part presents discussions about Chinese university EFL students' learning practice in an autonomous context, with their learning style, methods, and selection, organization, and employment of learning materials as well as corresponding strategies. Their adopted measures to cope with obstacles in autonomous learning are also discussed. It was found from the study that these EFL students could be autonomous learners to develop their language abilities and knowledge in an online context, while some learning obstacles and challenges existed in the process that required their attention and responses for making autonomous EFL learning successful.

7.3 Engagement in interactive EFL learning

7.3.1 Online interactive learning

By employing modern ICTs, Chinese university EFL students obtained more opportunities to engage in learning via the Internet, as observed in this study (see

Table 5.13 & Figure 5.8). ICTs acted as a catalyst to produce “real interaction” (Benson, 2001; Penfield, 1987; Rammal, 2005). It has also obtained positive learning results of EFL students in various contexts, including China and other Confucian heritage countries (e.g., Chang & Lehman, 2002; Chou, 2014; Codreanu & Celik, 2013; Wu, Yen, & Marek, 2011).

In this study, modern ICTs were found to enable these EFL students to interact with peers and teachers “more frequently than in the classroom”, where they “usually had only one time for a presentation in a week’s learning” (Chloe: 19 May 2016; see Figure 5.4). Online interactive EFL learning had students’ preference (see Table 5.12), and served as a major approach for students to develop their language abilities and knowledge in practice without imposing obstacles to their learning (see Table 5.13 & Figure 5.8). As previous a study has shown (Sachs, Candlin, & Rose, 2003), technology-supported interactive EFL learning is accepted as an approach of abundant opportunities for language practice and improvement.

Participants of the study described their experience of autonomous online interaction as “interesting”, “engaging”, and “fruitful” (Julia: 11 May 2016). It aroused students’ learning interest, and attracted students to actively engage in interaction (see Table 5.12; see Table 5.13 & Figure 5.8). Almost all participants in the interviews claimed that they would continue autonomous online interactive learning to serve their EFL development in the future. It reflected that autonomous

interactive learning that occurred in an online context provided students with enjoyable learning experiences (Peterson, 2006; 2012).

Interaction in a target language was treated as “a reflection of the nature of language” by students (Peter: 19 May 2016); that is, language is a tool for communication and interaction for some practical tasks both in educational settings and in the real world (Jonassen et al., 1995; Lapadat, 2002; Lave & Wenger, 1991). Interaction was a mediator for language acquisition by bridging students’ linguistic awareness with the real world (Khaliliaqdam, 2014).

However, traditional interactive learning failed to provide such mediation for language development. Although abundant interactive learning activities had been integrated into in-class EFL learning and teaching (see Figure 5.10), students did not like them. Autonomous online interactive learning can make changes to the situation through meaningful interaction that “puts language to practical use” (Betty: 19 May 2016). It usually “had a standard answer” (Ben: 11 May 2016), indicating its limited benefits for language acquisition (Chapelle, 2003). In a teacher–student one-way method for the fulfillment of academic requirements in the classroom, it could hardly deal with practical issues in life, nor offer alternative perspectives to deal with some real tasks (Lapadat, 2002; Vrasidas, 2000).

7.3.2 Topics of interactive learning

As discussed before, the types of learning contents influenced EFL students' participation, performance, and outcomes in autonomous learning (see 6.2.2).

Different types of topics also had influence on students' interactive learning (see Table 5.14). This finding was in line with those from previous studies, which have confirmed the influence of learning topics on EFL students' interaction (e.g., Jin, 2015; Luk & Lin, 2017; Selinker & Douglas, 1985).

It was found that topics that were “practically useful in daily life” (Alice: 19 May 2016), like those in LM2 and some in LM1, usually encourage their engagement in interaction. Practical topics enabled students to present “familiar ideas” in interaction (Susan: 12 May 2016), which promoted their engagement, particularly in an autonomous context (Droop & Verhoeven, 1998; Porte, 2003). Their understanding and knowledge of discussed issues were “enhanced through life experience”, which made them “more encouraged” (Monica: 12 May 2016) to engage in peer interaction.

EFL students found those learning contents with unfamiliar and abstract topics often made them “confused” (Bob: 12 May 2016), and discouraged their participation and engagement. Many students chose to skip interactive activities regarding these materials in LM3 (see Table 5.13 & Figure 5.8). In line with previous studies (e.g., Chiang & Dunkel, 1992; Kuo, 2011; Lee, 2007; Lee & Anderson, 2007), these learning contents often cause trouble to EFL students' learning and drive them away from interaction, as noticed in previous studies.

Interactive topics that were tagged as “information from learning” in this study were ranked as the least welcomed type (see Table 5.14). Participants skipped topics that were “similar with reading comprehension questions in language tests and in College English courses” (Olivia: 11 May 2016). It was labelled as “test-like interaction”, which was found to negatively impact EFL students’ engagement in autonomous interactive learning via the Internet.

Participants of this study were “tired of various language tests in the university” (Bob: 12 May 2016). They explicitly expressed their dislike of test-like interaction in this study, particularly with teachers, for EFL development, which was consistent with those in previous studies (e.g., Chou, 2015; Huang, 2012; Life, 2011; Yang, 2005). It has been noticed that interactive learning in a traditional in-class context in China is run by “top-down teacher–student, test-oriented policies” (e.g., Liu, 1998; Manchón, 2009; Zeng & Takatsuka, 2009). Students usually have limited motivation to engage in such interactive learning activities (King, 2002; Lei & Qin, 2009).

It suggests that simply introducing interaction into autonomous EFL learning could not arouse students’ interest to engage in or improve their language knowledge and communication abilities. Students expected learner-centred learning, instead of a continuation of their traditional test-oriented English courses (see 6.2.2; 6.4.2). It was

“not autonomous interactive learning”, but “teacher–student lecturing” (Ben: 11 May 2016).

7.3.3 Focuses in interactive learning

Participants of this study also showed their focuses on grammatical and lexical correctness in their learning practice. Chinese university EFL students are traditionally considered as test-driven students (Yang, 2017), who excel at test-oriented EFL learning and teaching, and are skilful in various test-like tasks (see 5.1 & 7.2.3). They were “very sensitive to mistakes in others’ presentations”, especially “grammatical mistakes” (Lydia: 11 May 2016). However, they might pay too much attention to the use of “correct” words and structures, and admitted that their attention paid to other aspects of interaction, such as meaning expression and efficient communication, was “largely compromised” (David: 11 May 2016). Many participants did not care for idea making and negotiation in interactive learning. As scholars have put (Tang, Chiou, & Jarsaillon, 2015), self-expression and intercultural communication might be challenging for students who were deeply influenced by the test-driven language learning.

Although some participants had noticed that their “heavy focus on correctness” went against the purposes of interactive language learning, making interactive learning “less meaningful” (Eric: 12 May 2016), a majority of them were observed to insist on a test-oriented strategy in interactive learning; that is, considering

grammatical and lexical correctness to outweigh meaning expression (Monica: 12 May 2016). Even in an autonomous non-test environment, the influence of traditional English language education was still strong among these Chinese EFL students. It might need more time and exercise for these EFL students to become “a good interactive learning partner” (Lydia: 11 May 2016) in a new autonomous learning context.

Traditional views have suggested that “showing off” language abilities and knowledge in public is intentionally avoided by EFL students, particularly in a Chinese context (e.g., Yan & Horwitz, 2008; Kim, 2004). EFL students always intentionally underestimated their EFL learning (see 7.2), attempted not to be outstanding among their peers, and tried to hide their learning achievements from others (Gu, 2010; Liang, 2006; Liu, 2001; Zhong, 2013). This students’ choice resonated with the traditional culture of this Confucian’s heritage country, one of whose highest moral standards is advised to be humble and modest (Scarborough, 1998).

However, it was found from this study that some Chinese university EFL students had high self-perceived English proficiency, which has been considered by previous studies as a factor leading to active engagement in interaction (MacIntyre et al., 1998; Su, 2005; Yan & Horwitz, 2008). These participants engaged in interaction to present “what I had prepared for a presentation” (Susan: 12 May 2016) in public. They felt

“proud” that “I could complete a task that others could not” (Emily: 18 May 2016). In interactive learning, helping peer learners was also considered as an important motivation for some participants. As a student pointed out in the interview: “it was important for me to let others know that I was good at learning” (Bob: 12 May 2016). It seems that some EFL students used interactive learning to display their success in language learning and to build a social connection with peers. For them, interactive learning was not only a learning approach, but also an important component of their social needs (see 6.5.2).

Besides the finding that students’ social needs pushed them to employ interactive learning to display their EFL achievements to peers, the online learning context was also believed to encourage students’ choices. ICTs help create a low-stress environment for language learners (Warner, 2004). In this context, EFL students usually have more autonomous control over cognitive development with the support of technologies (Jeong, 2004; Lee, 2005). Such control enabled students to express their feelings in a freer and more explicit way; that is, to “show off” their EFL learning achievements in public.

There were also EFL students who lacked confidence in their foreign language abilities and knowledge. They were observed to evade from interactive learning activities. A lack of confidence is a key factor that prevents them from actively engaging in interactive activities by using a target language (Ankawi, 2015; Chang &

Geary, 2015; Davoudi & Yousefi, 2015; Skinner, 2017). Students were concerned that their English levels might impede successful interaction. They were not sure “if I was qualified to comment on others’ presentations”, or “I did not know if their answers were correct” (Peter: 19 May 2016). EFL students who lack confidence may display a negative attitude towards language learning activities, including interactive ones (Huang & Hwang, 2013; Karahan, 2007). They would “feel sorry” that they could not provide “valuable feedback to peers’ presentations” (Eric: 12 May 2016). In this circumstance, EFL students intended to keep silent and withdraw from interaction.

Foreign language anxiety was anticipated by EFL students as an interfering factor of their engagement in interaction (see 6.1.3). In practice, EFL students usually felt “too nervous to take an active part” (Alice: 19 May 2016) in interactive learning activities. Their foreign language anxiety is closely tied with their motivation and willingness to participate in interactive learning activities (Yan & Horwitz, 2008). For those EFL students who lacked language confidence in interaction, foreign language anxiety has significant influence on their decisions on learning-related issues (Gardner, 1999; Gregersen & Horwitz, 2002; Spratt, Humphreys, & Chan, 2002). EFL students from East Asia, particularly those Confucian heritage countries, such as China, are inclined to be more impacted by the anxiety in interactive learning (Chu, 2008; Littlewood, 1999; Liu & Jackson, 2008; Simpson, 2008). They might feel it “better to withdraw” (Kent 18 May 2016) from learning due to the anxiety.

Some participants of this study indicated that they suffered from foreign language anxiety from time to time in interaction, which was “really frustrating” (Kent: 18 May 2016). Although online language learning provides a low-anxiety environment for interaction, and encourages students to take more risks (Warner, 2004), it may be not enough to motivate every student to reduce their anxiety, and to actively engage in interactive learning.

It was found that these EFL students’ anxiety about foreign language learning and interaction is also deeply rooted in its specific cultural background of China, where the concept of face is a very important element. EFL students are always concerned about their “face”, which refers to “an individual’s claimed sense of positive image in a relational and network context” (Gao & Ting-Toomey, 1998, p. 53). They indicated that they were “shy to express personal ideas autonomously” even though their “identity was covered” (Olivia: 11 May 2016). They were so in order to avoid students’ negative evaluation of their performance, which was a major reason for their anxiety (Chen & Goh, 2011; Gao, 1999; Liu & Jackson, 2008).

As indicated in this study, making mistakes was usually connected with losing face by Chinese EFL students (Susan: 12 May 2016). They were concerned about “making stupid mistakes” in interaction with peers, which might incur peers to “laugh at my poor language abilities”. That was usually seen as “losing face”, which was treated as a “very serious situation” among Chinese EFL students (Adam: 12 May

2016; Susan: 12 May 2016). To avoid making mistakes in public, some of them may adopt a more submissive way of learning (Wen & Clement, 2003). It also led to their withdrawal from participating in EFL interaction (Li, 2004).

For not losing face or hurting a peer's face in interaction, EFL students usually adopt some measures to make their presentations and comments "less targeted" (Susan: 12 May 2016). Anonymity is one of these measures that is commonly used in an online learning context. Anonymity works as a cloak of protection, which allows online language learners to be untraceable (Qian & Scott, 2007). With the protection of their real identities, it encourages students to take a bolder step in interacting with peers and teachers in an online context with less suffering from foreign language anxiety (Guardado & Shi, 2007).

It was found that the employment of anonymity could lead to different results of students' participation and engagement in interactive learning in accordance with the change of the types of interaction. This finding was different to those in previous studies, which have not distinguished peer interaction from the teacher-led one (e.g., Hosack, 2004; Miyazoe, 2008; Miyazoe & Anderson, 2011). To fill this research gap, the present study investigated EFL students' participation and engagement in the two types of interaction.

In peer interaction, anonymity was found to encourage EFL students' engagement in English language learning (see Figure 5.9). Pseudonyms allowed EFL students to give "critical comments" on peers' presentations "without many concerns" (Flora: 11 May 2016). In an autonomous context, students did not need to worry about "hurting peers' faces" (Lydia: 11 May 2016) when pointing out others' mistakes, nor losing face when making mistakes, because nobody would identify them. Anonymity worked to effectively reduce students' anxiety in using a foreign language, as previous studies have noticed (e.g., AbuSeileek, 2007; DiGiovanni & Nagaswami, 2001; Guardado & Shi, 2007; Li, 2013; YaChun & MauTsun, 2008).

The employment of pseudonyms contributed to students' active participation in peer interaction, as it enabled students to keep a friendly relationship (known as *guanxi*, Bian & Ang, 1997; Vanhonacker, 2004) among peer students by covering their real identities. The close and equal relationships among university EFL students, both in class and out of class, prevented them from commenting on peers' presentations explicitly. As it is an important concept among Chinese students, pseudonyms could effectively reduce participants' concerns of "breaking relationships (*guanxi*)" (Chen & Chen, 2004).

While in teacher–student interaction, revealing their identities or not was "not a concern" (Adam: 12 May 2016). EFL students might not be influenced by the use of anonymity in online interactive learning (see Figure 5.9). Teachers usually act as an

authority, who enjoy a higher status and impose more influence on students' learning, as commonly seen in a collectivist society, such as China and some other East Asian countries (Smith & Bond, 1993; Triandis, Chen, & Chan, 1998). Using real names for learning was often interpreted as "under the command of an authority", which was supposed to be "unquestionable" (David: 11 May 2016). Thus, pseudonyms had so little influence on their presentations that they "even did not notice I was using a pseudonym" (Bob: 12 May 2016).

Although anonymity has merits in promoting EFL students' interaction for learning, it should be noted that the use of anonymity does not necessarily lead to qualified learning outcomes. As some participants admitted in the study, they dared to escape from interactive learning on the Internet since nobody would identify them (Eric: 12 May 2016). Even worse, EFL students employed anonymity to "attack others" (Susan: 12 May 2016) occasionally. It has been noticed that anonymity may have association with students' unruly and inappropriate behaviours in a virtual context (Jessup, Connolly, & Galegher, 1990; Johnson & Downing, 1979; Zimbardo, 1969). Thus, the employment of anonymity for online interactive learning should be cautious.

As observed in this study, imitation was adopted by participants as a strategy when facing new learning and unfamiliar contents. Scholars have argued that EFL students are usually conservative about trials of new learning contents since they

intend to avoid making mistakes in new EFL learning (e.g., Apriliandaru, 2013; Ramadhan & Apriliawati, 2015; Talebi & Shirmohammadi, 2012). In China, students usually want to protect their faces by trying not to be the first one to trial the new learning contents, who may have greater possibility to make mistakes (Liu & Jackson, 2009; Wang, 2014). Instead, they prefer to imitate a model (Yang, 2005; Yan & Horwitz, 2008; Zhao, 2012) to “ensure good performance” (Betty: 19 May 2016). The absence of models in interactive learning activities, on the contrary, might result in their withdrawal from learning at the beginning stage (see Table 5.13 & Figure 5.8).

It should be noted that participants in the study did not copy their peers’ learning when imitating in language learning (Betty: 19 May 2016). They imitated peer’s learning and made necessary adjustment on the basis of their own knowledge and thinking, instead of a simple repetition (Lantolf, 2000; 2006). EFL students’ appropriate use of imitation at the early stage of language learning could promote their language development through “familiarizing with learning” (David: 11 May 2016). It helped these EFL students gain more confidence about their learning, and enhanced their performance in learning activities, which was in line with previous indications (e.g., Chang, 2015; Cortazzi & Jin, 1999; Sasaki & Takeuchi, 2010).

This study found that familiarity encouraged EFL students to engage in interactive learning. EFL students intend to engage in interactive learning activities that they are more familiar with (Li & Zhu, 2013; Philp, Walter, & Basturkmen, 2010).

Participants indicated that familiar learning contents were “easy to follow” (Emily: 18 May 2016). For example, LM1, which focused on students’ campus life and academic learning, as well as information about higher education and city views, was believed to be familiar for participants. Many participants mentioned that discussing topics from LM1 with peers was “comfortable”, which inspired them to “have many ideas to share” (Kent: 18 May 2016). They admitted that learning with familiar topics led to their active engagement in interaction.

This study noted that familiarity with learning creates an encouraging context for students. Making students familiar with target culture and target language prior to their commencement of interaction claimed to obtain “more satisfying results” (Roy: 18 May 2016), since it enabled them to engage with more confidence (Chen, 1996; Huang, 1998; Leibowitz, 2005). Familiarity can play a contributing role in intercultural communication and interaction in EFL learning and teaching (Ho, 2009; Larzén-Östermark, 2008).

Furthermore, familiarity with the learning procedure of interactive EFL learning activities could be “more positive” (Alice: 19 May 2016) to students’ participation and engagement in learning. It is advised for interactive English learning to familiarize students with the learning procedures at the beginning stage (McDonough & Sunitham, 2009; Wang, 2014). Participants indicated that they would be “more willing” (Aaron: 11 May 2016) to engage in interactive learning activities if they

could know its procedure in advance. Otherwise some students might evade from learning and keep silence in the whole process (Wilang, 2017).

It was found from the study that many participants kept silent at the beginning of interaction in LM1, because they did not know how this learning would be operated. They indicated that they preferred to be shown “a complete round of peer interaction” (Peter: 19 May 2016) before they engaged in learning. They also mentioned that it would be better for them if there were examples to follow. As found from the study, being familiar with procedures of interactive learning was treated as “a pre-requisite” (Chloe: 19 May 2016) for many EFL students.

Unfamiliarity with learning contents was found to lead to obstacles in EFL learning, particularly in an autonomous context, where students “had to self-motivate” (Ben: 11 May 2016). “Abstract, alien, and unfamiliar” (Julia: 11 May 2016) learning contents usually lead to ineffective English language development, as a previous study has indicated (Chen, 2006). EFL students might not be able to understand the learning, nor receive effective information when they had no knowledge about the learning. They might find that “I even did not know what they were talking about” (Bob: 12 May 2016). As a result, less students engaged in interaction in LM3, which was described to have unfamiliar topics for Chinese university students (see Table 5.13 & Figure 5.8). Unfamiliarity with learning contents or learning procedures may demotivate them and prevent them from continuing learning (Duong & Seepho, 2017;

Ebata, 2009; Li & Zhou, 2013). It was difficult for participants, and many of them avoided participating in such interactive activities.

As for new and unfamiliar learning materials, a difference between EFL participants' indications about online language learning and their learning practice was spotted in this study: they asserted they were expecting changes and innovations to current EFL learning and teaching in the university (see 6.2.2; see Table 5.3), while they avoided using new contents or adopting unfamiliar forms of learning resources for learning practice as they were "more difficult" (Susan: 12 May 2016).

Familiarity cannot always arouse EFL students' learning interest (Bahous, Bacha, & Nabhani, 2011; Stott, 2004), nor can it necessarily help students achieve their learning goals by providing challenging but workable learning contents (Cheng & Dornyei, 2007). EFL students, as noticed in this study, were aware of these features of familiar learning resources: "on one hand, familiarity made me confident and willing to engage in interaction, while on the other hand, it brought about repeated and boring learning experiences" (Kent: 18 May 2016). They were concerned that learning with familiar ones might "limit my language improvement" (Emily: 18 May 2016).

Although this group of EFL students had noticed the flaws of learning with familiarity, they still limited themselves to a small range of topics that they were familiar with. Interactive language learning is supposed to effectively promote

students' language development through meaningful interaction, which always occurs through participants' evolving ideas from different perspectives (Lapadat, 2002; Lave & Wenger, 1991). Being immersed in a familiar context and surrounded by repeated tasks, however, might not be effective for language development, since it could "hardly trigger the inspiration" in the learning process (David: 11 May 2016). Learning contents should be incorporated into EFL students' ZPDs (see 6.4.2), where "a safe but challenging" learning context is provided through presenting strange and unfamiliar ones (van Lier, 2004: p. 196). This is further discussed in the following section (see 7.4).

By engaging in interactive learning, these EFL students might not question themselves as a "qualified learner" (Gloria: 18 May 2016), as they encountered in their individual learning. This approach provided students with the opportunities to communicate with their teachers and peers in language learning, through which students could have a picture of their learning performances from others' feedback. As indicated by some scholars (Ellis & Sinclair, 1989; Ho & Crookall, 1995), autonomous language learners are supposed to have some knowledge about themselves. Self-awareness is a necessity for autonomous learning (Simard, 2004). By integrating interaction into autonomous learning, EFL students can think critically about their learning and themselves, and get better self-evaluation (Rivers, 2001; Schwienhorst, 2003). The approach enabled self-awareness for indicating learners' cognitive development (Lee, 2011).

Withdrawing from interactive learning activities, as some students have realized in this study, might lead to unproductive consequences to their language development, and losing a picture of their learning progress (Eric: 12 May 2016). Interactive learning was not only a way for language development, but also a reflection to help them evaluate their current language levels (Duffy & Jonassen, 2013), and lead to a more strategic plan for future language learning (Hurd, Beaven, & Ortega, 2001).

This part presents discussions centred on Chinese university EFL students' engagement in interactive learning activities on the online learning platform. Online interactive learning was recognized as a positive approach for language development, having various merits that could hardly be provided by its traditional counterpart. Factors that had impacts on EFL students' engagement and performance in interaction were also analysed and discussed in this part.

7.4 ZPD in EFL learning

7.4.1 Learning in ZPD

The current study discovered that EFL students perceived “essential improvement” (Bob: 12 May 2016) of their language abilities and knowledge through learning within the range of ZPD. It was in their ZPDs where language learning actually occurred (Woo & Reeves, 2006), and whose learning materials could “bring about effective promotion” to students' language development (Alice: 19 May 2016).

Learning with materials in the ZPD has been confirmed in previous studies to lead to productive learning outcomes (e.g., Aseri, 2017; Ash & Levitt, 2003; Kao, 2010; Ovando, Collier & Combs, 2003; Yang, 2006).

Participants found that learning with appropriate materials was “comfortable”, since they were “suitable for my current language abilities” (Kent: 18 May 2016). This reflects that ZPD serves as an instructive and guiding role for EFL students to integrate learning resources with appropriate difficulty into their language learning (Lantolf, 2000; Smagorinsky, 1995). These materials also encouraged students to have an active involvement in language learning, as previous studies have shown that difficulty of learning usually has a correlation with EFL students’ learning motivation, as well as their willingness to engage in learning activities (Aubrey, 2010; Gürsoy, 2013).

When facing materials with appropriate difficulty, EFL students were found to be “more motivated” (David: 11 May 2016). They indicated that they preferred learning contents that “were not too difficult, nor too easy” (David: 11 May 2016), which was in line with their arguments in previous discussions (see section 6.1.4). Incorporating learning into their ZPDs accelerates learning, and leads to positive outcomes (Chaiklin, 2003). A student’s potentiality and motivation for learning are always “strongest within his or her ZPD” (Fabes & Martin, 2001, p. 42). Autonomous EFL learning with materials that are beyond their ZPD, on the other hand, may result in

demotivation of students (Han, 2007), making students “less interested in learning in the near future” as well (Lydia: 11 May 2016).

As reported in this study, EFL students found some learning contents in LM3 were “far beyond” their current language levels, leading to a decrease in their engagement (Tina: 12 May 2016). These students claimed that learning with difficult materials was “meaningless” (Tina: 12 May 2016). They believed that, even if they joined the learning, they “would learn nothing meaningful” (Susan: 12 May 2016). Learning a foreign language beyond ZPD largely demotivates students, particularly in an autonomous context (Colina & Mayo, 2007). Matching EFL students’ learning contents with their current language levels is one of the key concerns of online language learning (Smagorinsky, 1995).

7.4.2 Multimedia learning resources

Although EFL students only spent fragmented time-slots on autonomous online learning (see 7.1.1), videos and audios usually took most of their learning time. They watched the videos “two to three times” in their online learning (Chloe: 19 May 2016). Multimedia resources were “the focus” of their EFL learning in an autonomous online context (David: 11 May 2016). Multimedia learning resources that are incorporated in EFL students’ individual ZPD have become routine for current language learning and teaching, both found in the current study, and in literatures (e.g., Hayati & Mohmedi,

2009; Huang & Eskey, 2000; Hwang & Huang, 2011; King, 2002; Mekheimer, 2011; Stewart & Pertusa, 2004).

Multimedia-supported language learning was considered as an effective approach that improves students' language skills, abilities, and knowledge (Gloria: 18 May 2016; see Table 5.11), and also enhanced their motivation, interest and confidence (e.g., Gilakjani, 2012; IITer, 2009; Lin, 2003; Zhong & Shen, 2002). Multimedia were believed to "well serve" (Gloria: 18 May 2016) participants' individualized EFL learning as a newly emerging form of resources. They were employed as one of these participants' focuses when learning EFL on the Internet.

As a student described in the study, she found that using multimedia materials created "an authentic English-speaking world" for her individual learning, which provided EFL students with "extraordinary experience", as well as "effective exposure" (Lydia: 11 May 2016) to the target language. Participants found that by employing multimedia, they could "build a language context" that enabled them to have actual language development on the basis of their current language levels (David: 11 May 2016). It was in line with empirical studies that multimedia-supported language learning could provide EFL students with immersive learning experience, helping them develop their language knowledge and abilities efficiently and effectively (e.g., Alberta Education, 2010; Broussard & Garrison, 2004; Cummins, 2000; Gibbons, 2002; Novera, 2004; Tallin, 2005).

EFL students made “various uses” (Monica: 12 May 2016) of multimedia materials, such as communicating and interacting with native speakers virtually, imitating pronunciations, and learning with slang (Aaron: 11 May 2016; Susan: 12 May 2016; Zoe: 12 May 2016). These materials not only served to improve EFL students’ linguistic knowledge, but also fulfilled students’ individualized needs of EFL learning in accordance with their ZPDs. They acted as a strong motivator and supporter for EFL students’ autonomous language learning, and encouraged them to engage in learning activities (Wichadee, 2011).

Multimedia resources were “a good tool” (Kent: 18 May 2016) for learning inter-cultural contents in EFL students’ autonomous online learning practice, as found from this study. Inter-cultural awareness benefited from multimedia language learning (Hubbard & Siskin, 2004), since multimedia materials enabled EFL students to “better understand” the learning contents through the assistance of “audio-visual” information (David: 11 May 2016). Beyond language knowledge, multimedia resources also provided students with more ways to feel the real world than the traditional textbooks did. These resources created a space allowing for the target language and culture, where students could have a real contact with them. These students, by using multimedia resources, language learning occurred not only in an educational setting, but also in a broader cultural sociocultural context, where they

constructed the language knowledge through reflections of the real world (Duffy & Jonassen, 2013).

Multimedia resources thus create an immersive environment for language learning. To learn EFL in “a more immersive and engaging environment” (Lydia: 11 May 2016), authentic language materials were needed by this group of students (see 6.1.4). Authentic resources were recognized as an important tool for EFL learning and teaching (Sun & Chang, 2012). A wide range of studies have confirmed the effectiveness of authentic multimedia materials on the development of EFL students’ language skills and cultural awareness (e.g., Al-Jarf, 2004; Bahrani, 2011; Mardani & Tavakoli, 2016; Mayora, 2009; Riazi & Rezaii, 2011; Sabet & Mahsefat, 2012).

This study observed that EFL students actively used provided authentic multimedia materials to organize their learning practice. They preferred materials that were authentic, and believed this type of material could “be better presented in the form of multimedia” (Carl: 11 May 2016). Multimedia is considered as “one of the richest ways” to present authentic input for language learning (Ogasawara, 1994). It provided them with “more sensual” learning materials, which helped them “gain a deeper understanding” of the authentic learning contents (Monica: 12 May 2016). EFL students saw multimedia as a good carrier for authentic materials (Lin & Chen, 2007; David: 11 May 2016; Lydia: 11 May 2016; Susan: 12 May 2016).

As participants indicated in this study, online learning with authentic contents created an engaging autonomous environment, where learning became “enjoyable” (Monica: 12 May 2016). The integration of modern technologies into language learning made it possible for EFL students to access attractive and “appropriately difficult” learning materials that could “hardly be provided by textbooks” (Aaron: 11 May 2016). Online learning helped them frame learning into their individual ZPD. This finding was in line with previous studies, which have noticed that with the support of ICTs and digital devices, online learning can provide abundant authentic materials for students’ language learning (e.g., Brett, 1997; Hun & Beglar, 2005; Riazi & Rezaii, 2011; Wichadee, 2010).

Learning with authentic resources not only improved students’ linguistic knowledge, but also “opened a window” that enabled them to see the world (Susan: 12 May 2016). Through authentic materials, EFL students build a connection with the real world (Duffy & Jonassen, 2013), which “provided beneficial feedback” (David: 11 May 2016) to EFL students’ learning. In line with a previous indication (Thanasoulas, 2000), authentic resources enabled language learners to perceive and to know the real world in a more engaging way. Authentic resources created a learning space contextualized in a broader sociocultural context, in which EFL students could better learn a foreign language with “satisfying learning experiences and outcomes”, rather than being limited within the classroom and using old materials (Flora: 11 May 2016).

It was noticed in this study that in online learning, EFL students always selected and employed multimedia materials, rather than traditional text-based materials (see Table 5.8). Multimedia resources strongly attracted students to continue the promotion of language learning and to become lifelong learners (Brett, 1998). Modern ICTs created “extraordinary” and “innovative” language learning (Lydia: 11 May 2016; see Table 5.3). These resources served as a new form of learning materials for Chinese university EFL students. EFL students’ preference for new forms of learning materials was in line with previous studies (e.g., Arnold, 2009; Day & Bamford, 2002; Huang, Chern, & Lin, 2009; Miyazoe & Anderson, 2010).

Traditional text-based and paper-based EFL learning and teaching methods have been employed by English teachers for decades, and it is still the mainstream for official in-class language education in China (Hu, 2005). Although the traditional methods have helped students achieve some outstanding outcomes for foreign language education in China (Yan, 2012), some participants complained they were out of date and could not fulfil their individualized learning needs in the modern society (see 7.2.1). It was supposed to “be responsible” for making traditional EFL learning and teaching “less satisfying” (Ben: 11 May 2016). EFL students were reluctant to use traditional text-based materials for learning on the Internet (Emily: 18 May 2016). Instead, they invested time on multimedia resources.

As found from this study, EFL students intended to actively seek and employ a learning approach, with corresponding learning methods, strategies and materials, on the basis of their current language levels and learning needs. EFL students in China are traditionally recognized as passive information receivers in the classroom, relying on teachers' assignments and requirements for language learning and practice (Peng & Woodrow, 2010; Yu & Wang, 2009). However, this study had a different finding. Students were bold to make employment of new forms of materials in autonomous ways (see Table 5.8). Multimedia resources, which were "different from those used in the classroom", were largely used as "the focus" of students' online learning (David: 11 May 2016).

It should be noted that learning with new forms of materials did not necessarily lead to effective language ability development, nor always aroused EFL students' learning interest. EFL students displayed limited interest in some learning contents in LM3, which were "far beyond" (Tina: 12 May 2016) their current language levels, even though these materials were presented in multimedia forms. There were also students who indicated that multimedia resources sometimes were "not suitable for learning", and learning might be "less efficient" (Julia: 11 May 2016). Therefore, multimedia resources need to be careful to take students' language levels and learning needs into consideration (Lee, 2005).

This study also suggested that multimedia resources should be framed within EFL students' ZPDs, where their learning could be facilitated, accelerated, and motivated (Chaiklin, 2003). Otherwise, EFL students might find their learning outcomes were less productive, since multimedia were just another form to organize materials, rather than "a change of learning contents" (Ben: 11 May 2016). Simply incorporating inappropriate learning contents into multimedia, and ignoring students' different learning situations, could hardly meet their learning needs, nor fulfil their expectations of a new EFL learning approach.

7.4.3 Learning strategies

Besides multimedia learning resources, learning strategies in an autonomous online context was also different from that in a traditional in-class context. Strategies are not inherently good or bad, but on dependence of their using contexts and corresponding resources (Cohen, 2003; 2007; Grabe, 2004). Therefore, different "ways [strategies]" (Monica: 12 May 2016) for learning in an autonomous online context were required (Chloe: 18 May 2016). Under the circumstance where teachers' instructions were limited, students' selection and adaptation of a certain learning strategy had to be built on the base of their "own understanding and current knowledge" (Chloe: 18 May 2016); that is, their metacognitive awareness (Carrell et al., 1998; Cohen, 2007; Zhang, 2008).

A wide array of learning strategies are deployed by EFL students and teachers to serve their language learning, such as traditional ones like skimming, memorizing, dictionary, note-taking strategies, and more recently recognized ones like visual, auditory, meaning-oriented, activation, contextual and rehearsal (Carrell, 1989; Block, 1986; Cohen, 1990; Green & Oxford, 1995; Oxford & Nyikos, 1998; Pressley, 2002; Zhang et al., 2008). The study found these EFL students carefully selected and adopted strategies to serve their learning with new forms of materials. For example, students improved their learning strategies from “repeatedly memorizing a new word”, to “putting it into the real context” with authentic multimedia materials (Gloria: 18 May 2016). This indicated that an autonomous transfer from rote learning to contextual learning occurred in students’ learning practice, although students themselves might not know the terms.

Among various strategies, the task-based one was a major strategy EFL students used in an autonomous online context. Tasks that are framed in EFL students’ ZPDs are one of the effective resources for their language development and knowledge construction (Yang, 2003). Existing studies have confirmed the effectiveness of learning tasks as a basic component for EFL practice in various learning contexts, including in-class and online learning (e.g., Birjandi & Malmir, 2009; Khaliliaqdam, 2014; Mirzaei & Eslami, 2015; Nahavandi, 2011).

It was noted that the task-based strategy is used in various levels of educational institutions in China as “one of the major ways” for English learning and teaching, and a learning strategy that is “strongly recommended” (Alice: 19 May 2016) by English teachers. In China, tasks in EFL learning and teaching usually play a central role, particularly in the traditional formal learning contexts (Butler, 2011; Littlewood, 2007). For Chinese EFL students, it is one of the most familiar strategies that they adopt for language learning (Littlewood, 2007). As strongly believed by some participants, autonomous EFL learning was “equal to” the accomplishment of learning tasks (Julia: 11 May 2016).

The current study found that many participants gave priority to accomplishment of tasks when learning on the platform. EFL students treated learning tasks as “the most important” or even “the only” indicator of their learning performance (Betty: 19 May 2016). They employed various resources as supportive materials, including videos, audios, notes, extending materials, and reference answers, to “serve the accomplishment of tasks” (Zoe: 12 May 2016). It reflected that tasks played a central role in autonomous language learning (Khaliliaqdam, 2014), being of significant status in the learning process as a common mediation for learning (Gava, 2011). Learning in ZPD was conceptualized as task-specific (Ellis, 2003), as tasks helped EFL students locate their individual ZPD and better plan and conduct their learning.

However, it was also noted that a considerable number of participants stuck to the task-based strategy for EFL learning in an autonomous context, rather than developing a “corresponding strategy” for learning in accordance with the changes of learning resources in the context. Although online EFL learning and teaching was expected to bring about changes to learning contents and corresponding strategies (see Table 5.3), some Chinese university EFL students only duplicated the traditional EFL learning in a new online context. From this perspective, no essential innovations were made to current language learning along with the introduction of modern ICTs as predicted in previous studies (e.g., Gooley & Lockwood, 2012; Lu, Zhao, & Yang, 2012). Instead, students stuck to their most familiar learning strategy for safety purposes (Littlewood, 2007).

EFL students had shown the awareness that sticking to a traditional task-based strategy was “far from enough” (Lydia: 11 May 2016) to expand their learning, nor to make essential innovation to current language learning and teaching in a Chinese university context. There was a need to improve students’ cognitive awareness of language learning, for introducing corresponding learning strategies into online EFL learning and teaching in accordance with the uses of multimedia resources (Carrell et al., 1998; Cohen, 2007; Zhang, 2008). It kept online learning from being another “old wine in a new bottle” (Adam: 12 May 2016) for students, rather than an innovative learning approach with refreshing learning experiences.

7.4.4 Self-evaluation

Besides learning materials and strategies, the concept of ZPD also provides a framework for self-evaluation, which is advised to be integrated into EFL students' autonomous language learning (Levitt, 2003). In the autonomous learning context, EFL students were in need of self-evaluation to plan their learning (Poehner, 2012), and then they could know "what were suitable for the next step" (David: 11 May 2016). They might "lose the orientation" of learning and could not promote the development of language abilities in "an essential way" (Julia: 11 May 2016) without the procedure of self-evaluation. Existing studies have confirmed the effects of incorporating self-evaluation into language learning on students' performance and outcomes in an autonomous context (e.g., Chen & Cheng, 2008; Nesbit, Belfer, & Vargo, 2002).

Being treated as a "convenient and operable" (Kent: 18 May 2016) way to support students to independently engage in self-evaluation, online learning tools were found to play a role in an autonomous learning context. Recent studies have indicated that the integration of modern technologies into language learning brings about more convenience and effectiveness for self-evaluation (e.g., Alsied & Pathan, 2013; Diep et al., 2017; Ishikawa & Akahane-Yamada, 2015). EFL students' employment of online learning resources for self-evaluation in their learning process was observed in this study.

Participants employed learning tasks as one of the key “evaluators” of their progress in the autonomous learning process. They thought that learning tasks could tell whether they had accomplished learning (Alice: 19 May 2016). They also indicated that they could know if they were prepared to move to the next phase of learning by referring to learning tasks (Carl: 11 May 2016). Learning tasks acted as an “indicator” of the learning, enabling students to have control of their learning situations, and be aware of their current ZPDs of language development (Williams & Andrade, 2008).

Scaffolding was another material to help EFL students’ evaluation in autonomous language learning, as well as to promote EFL students’ knowledge in their own independent learning. This part will be discussed in the following section (see 7.5).

Besides learning materials, EFL students also evaluated their performance and learning outcomes through interacting with peers and teachers, which has been discussed previously (see 6.3.1; 6.3.3; 7.3.3).

Students’ self-evaluation is suggested to be framed within their ZPDs in EFL learning, as ZPD provides a guide for them to evaluate their learning performance and outcomes (Hessamy & Ghaderi, 2014; Lantolf & Poehner, 2008; Saeidi & Hosseinpour, 2011). Evaluation in language learning should work as “an intervention” (Sternberg & Grigorenko, 2002, p. ii), through which learners are expected to have

control of their current learning, as well as make appropriate plans and adjustments to their future learning

As noticed in this study, participants employed a dynamic way of self-evaluation; that is, students received instructions from teachers, peers and scaffolded resources for each task that they encountered obstacles. They moved to the next phase of learning practices “if I were doing well in these tasks”. They were also allowed to “turn back to revise them” if they were not satisfied with their previous learning (Carl: 11 May 2016). By referring to the outcomes of self-evaluation, students made the evaluation procedure a part of their learning and training, and planned their next stage of learning on the basis of their performance in current learning.

Compared with traditional summative assessment (Garb, 2008), the dynamic way participants employed in the online context enabled them to review the learning at any time. They could “start from any part”, and “progress in any order” in the learning (Eric: 12 May 2016). It reflected that the online EFL learning was not a linear process, but a recursive one with revision and relearning, as well as opportunities to work through the whole learning process (Tavakoli, 2012). By using the dynamic procedure of self-evaluation, participants “always had a picture of my learning performance” (Roy: 18 May 2016).

Furthermore, these participants employed self-evaluation not only for diagnosing their current learning, but also for planning their further learning upon the results of self-evaluation (Flora: 11 May 2016). It reflected a characteristic of the successful evaluation that participants paid attention to their further knowledge construction (Lan & Liu, 2010). By employing self-evaluation, these participants made a blueprint of their language development within the range of their ZPDs. From this perspective, self-evaluation served their purpose of pursuing language development as autonomous learners in the long term (Lai, 2017).

It is quite encouraging to see that participants in the current study autonomously employed available resources to set up the self-evaluation of their language learning via the Internet. In China, the responsibility of formally evaluating students' language ability belongs to English teachers (Buendía Arias, 2015; Ren & Sun, 2011). Students' self-evaluation and peers' mutual evaluation are usually informal and inadequate in the classroom (Lee, 2010). However, these students integrated the evaluation into their learning practice, making it "a constituent part" (Monica: 12 May 2016) of their autonomous online EFL learning. They displayed their initial awareness of a dynamic evaluation that viewed their learning as long-term motional process (Garb, 2008).

In the evaluation process, the responsibility of learning was transferred to students and, at the same time, EFL students found themselves to "be freed from being dependent on teachers" (David: 11 May 2016) by incorporating the procedure

of evaluation into their autonomous learning process. Learning-related decisions on some complex issues, which contained self-evaluation, were made by EFL students themselves, indicating an elevation of autonomy (Brett, 2004; Garrison & Archer, 2000).

This part discusses Chinese university EFL students' online language learning in terms of the concept of ZPD, with the learning focus on their employment of various materials. These students were found to engage in learning within their ZPDs with the support of ICTs. Various resources for learning were selected and employed by them, a major form of which was multimedia. Corresponding strategies were developed and adopted in the learning as well. EFL students also engaged in the evaluation process of language learning. Regarding materials, ZPD worked as a guide for students' autonomous online learning with abundant resources. EFL students' self-evaluation in an online context was also framed in the ZPD.

7.5 Engagement with scaffolding in EFL learning

7.5.1 Employment of scaffolding

Scaffolding, as an important part to language learning, was treated as a necessity to support Chinese university EFL students' autonomous online EFL learning.

Scaffolding was described to play a “key” and “critical” role (Tina: 12 May 2016) in the learning process, which enabled them to successfully complete learning tasks independently. Scaffolding has been observed to play a role in an autonomous EFL

learning context (e.g., Chang, Sung, & Chen, 2001; Lan, Sung, & Chang, 2007; Li, 2010; Oliver & Herrington, 2000; van de Pol, Volman, & Beishuizen, 2010).

Otherwise, EFL students “might not have been able to do” (Ohta, 2000, p. 52) without using scaffolding.

As students indicated in the interviews, without these incorporated supportive and instructive learning resources, EFL students might give up autonomous learning practice, or not accomplish learning tasks successfully by themselves (Alice: 19 May 2016). Scaffolding has been accepted as one of the “most recommended, versatile, and powerful instructional techniques” for foreign language learning and teaching (Clark & Graves, 2004: p. 182), as learners can leverage the knowledge and skills to achieve their learning goals with it (Cole, 2006; Soloway et al., 2001).

With ICTs, EFL students found it was “easier” (Alice: 18 May 2016) for them to get assistance in the learning. They indicated that they would be “more willing” to make use of scaffolding if computer-based and online resources were provided in the learning (Aaron: 11 May 2016). In accordance with the indication made in Rahimi and Tahmasebi (2011)’ study, scaffolding, working in a technology-supported form in an online learning context, could better help students overcome obstacles and achieve learning goals. Technology-supported scaffolding can facilitate language learning in a more convenient way, which has been widely recognized in previous studies (e.g.,

Nguyen, 2013; Ramnarain, 2012; Rezvani, Saeidi, & Behnam, 2015; Santoso, 2008; Woo et al., 2011; Zoreda & Vivaldo-Lima, 2008).

7.5.2 Soft scaffolding

In the autonomous online EFL learning context, two types of scaffolding, the soft type and the hard one, were both employed to support EFL students' language practice and development. In EFL learning and teaching, soft scaffolding is that comes from real persons, including knowledgeable teachers and more capable peers (Bruner, 1986; Vygotsky, 1978). It is naturally associated with interactive learning. Teacher scaffolding and peer scaffolding exist widely in language learning, helping learners achieve their learning goals via interaction and collaboration. Empirical studies have confirmed the contribution of soft scaffolding from both teachers and peers via interaction to students' language development (e.g., Hayati, Jalilifar, & Mashhadi, 2013; Jalilvand, 2014; Pifarre & Cobos, 2010; Riazi & Rezaii, 2011).

Teachers are a key source of soft scaffolding in language learning (Davis & Miyake, 2004). Many students expected scaffolding from their teachers could provide them with instructions that were of direct help in their learning. In practice, they made heavy use of teacher scaffolding "as long as I got the opportunity" (Olivia: 11 May 2016). These instructions were believed to be "reliable and effective" for language development (Ben: 11 May 2016). As indicated in existing studies (Jang, Reeve, &

Deci, 2010), teacher scaffolding has been accepted as a major type of instructions in language learning and teaching.

Students also indicated that they would not participate in learning activities if no assistance from teachers were provided (Julia: 11 May 2016). It reflected that teachers' involvement in interactive learning, as well as teacher-led instructions, usually have a positive correlation with students' engagement and performance in language learning activities (Gray et al., 2005; Goodison, 2003). Teacher scaffolding was treated as a necessary part of EFL students' language learning, which could not be easily replaced (see Figure 5.14).

Peer scaffolding was recognized as a major form of scaffolding. Students indicated in the study that they learnt a lot from peers' presentations that enabled them to gain "a deeper understanding" of a given topic (Kent: 18 May 2016). Students preferred their personal views to be heard, which might be helpful for others' language learning practice (see Table 5.14). In the meantime, peer scaffolded made its contribution to effectively facilitate autonomous online learning by encouraging EFL students to share and exchange ideas (Barab & Duffy, 2000; Yang, Yeh, & Wong, 2010).

This study found that exchanging and sharing ideas was one of the major forms for scaffolding in EFL learning. It enabled students to absorb language knowledge

through alternative perspectives from interaction with peers while solving some real issues (Alptekin, 1993; Chlopek, 2008; Nassaji, 2003; see 6.2.3). As a student described in the interview: “different educational backgrounds can always analyse a given question from various angles, which may trigger my new thinking, as well as new expressions in English” (Adam: 12 May 2016). It has been recognized as an effective way for EFL students to provide and receive assistance for language development (e.g., Nguyen, 2013; Peterson, 2012; Riazi & Rezaii, 2010; Yang & Wilson, 2006).

It was found that the equality and close relationship (*guanxi*, see 7.3.3) among peer EFL students in China contributed to intersubjectivity, benefiting peer scaffolding in a Chinese university context. Intersubjectivity between EFL students was expected to work as a principle of peer scaffolding (Bonk & Kim, 1998). Participants in this study indicated that they made good use of peer scaffolding by “respecting peers’ personal views” (Julia: 11 May 2016), and obtaining information and language knowledge from them. That led to mutual understanding and mutual benefits of both scaffolding providers and receivers in interaction.

7.5.3 Hard scaffolding

Hard scaffolding, the “static support that can be anticipated and planned in advance” (Brush & Saye, 2002, p. 2), was treated by participants of this study as “a perfect match” (Aaron: 11 May 2016) with autonomous online language learning,

since it could work independently from a teacher's or a peer's involvement, particularly for students who preferred to learn alone (see 7.2.2). Hard scaffolding consists of materials in various forms, including notes, references, extended information and explanations, aiming at building students' linguistics knowledge and language abilities from different angles (Kao, Lehman, & Cennamo, 1996; Mardijono, 2012). It is expected to develop students' abilities and knowledge to a target degree within their ZPD from a lower level gradually (Gillies & Boyle, 2005; Siyahhan, Barab, & Downton, 2010).

The platform provided abundant hard scaffolded materials for EFL students' learning activities (see Table 5.16), and students integrated scaffolding into different parts of their online EFL learning for meeting various purposes, such as individual autonomous learning (see 7.2), interactive learning (see 7.3), self-evaluation (see 7.4.4) and learning tasks (see 7.4.3). Students described that they made "heavy and repeated use" (Kent: 18 May 2016) of these instructional materials in their learning. Referring to hard scaffolding in students' autonomous learning often accounted for a "considerable amount of learning time" (Olivia: 11 May 2016).

Participants made active employment of both types of soft and hard scaffolding to achieve their learning goals by overcoming learning obstacles. As indicated by Ohta (2000), both types enable a learner to do what "she or he might not have been able to

do otherwise” (p. 52). Scaffolding played a role to facilitate language learning to arrive at a higher level that was incorporated in EFL students’ individual ZPD.

Unlike some arguments made in previous studies that EFL students would give up autonomous learning when encountering difficulties and being demotivated (Stipek, 1993; Schunk, 1983; Zhen, 2012; Zeng, 2014), participants in this study attempted to employ available scaffolded resources to assist their completion of learning, instead of withdrawing from learning completely. Incorporated scaffolding could be a tool, as Gillies and Boyle (2005) suggested, to bridge the learning gap, and to motivate them to overcome obstacles during the learning process. It helped EFL students effectively develop their language abilities and knowledge, particularly in an autonomous learning context.

Regarding hard scaffolding, two types of materials are incorporated to help EFL students’ language learning: explicit scaffolding and tacit scaffolding (Hadwin & Winne, 2001). Explicit scaffolding instructs students by providing straightforward information and materials that are in direct relation with learning activities. Tacit scaffolding is less directive that it promotes EFL students’ language development from other perspectives rather than task accomplishments. It was found from the study that EFL students made different employment of, and had different attitudes towards, the two types of hard scaffolding in their autonomous learning.

As found from this study, explicit scaffolding, which could provide “straightforward aids” to learning, and that could “directly help learning task accomplishment” (Bob: 12 May 2016), were more preferred and employed by EFL students. Students employed these materials to promote learning and to accomplish tasks with less obstacles. Explicit scaffolded materials were regarded as “teachers in autonomous learning” (Roy: 18 May 2016) to a certain degree, since scaffolding could “target my obstacles” and provide “explicit solutions” to EFL students’ learning problems (Olivia: 11 May 2016).

It was found from the study that reference is a common type of explicit scaffolding employed by EFL students in their language learning. As reported by participants, reference “directly helps accomplish learning tasks” (Peter: 19 May 2016). EFL students made “the most use” (Peter: 19 May 2016) of reference as scaffolding in learning practice. For EFL students, particularly those who felt themselves to be “less capable” (Monica: 12 May 2016) in EFL learning, reference helped achieve their learning goals in an easier way (Erkaya, 2005; Yu et al., 2016; Xiao, 2007).

Reference was also used for self-evaluation of learning by EFL students. It was intentionally employed by EFL students to “check answers” (Carl: 11 May 2016), for helping evaluate their learning performance and tasks (see 6.2.4). It worked as “a standard” (Bob: 12 May 2016) for EFL students to evaluate their learning.

Particularly in an autonomous context, where traditional evaluators are less involved (see 6.2.4; Liu, Liu, & Hwang, 2011), EFL students believed that reference could play a more contributing role to help them evaluate their performance and outcomes of EFL learning.

Scaffolding script, another type of explicit scaffolding, was also acting as a contributing role to EFL students' understanding of learning materials (Shih, 2010). In early empirical studies, video scripts are believed to benefit EFL students' English language development, as well as their intercultural awareness (e.g., Garza, 1991; Price & Dow, 1983). Recent studies have begun to put scripts into an online learning atmosphere, focusing on their effectiveness to help students learn with multimedia resources (e.g., Shrum & Glisan, 2000; Thornton & Houser, 2005).

In this study, students felt that they had difficulty in following the videos and audios word by word when learning online (Kent: 18 May 2016; Adam: 12 May 2016). Scaffolding script enabled them to fully understand videos and audios, as well as to accomplish incorporated learning tasks. Script was used as "an important constitutive part" (David: 11 May 2016) of multimedia learning resources in online learning, as it contributed to EFL students' acceptance and independent employment of multimedia-supported language learning materials (Hafner & Miller, 2011; Shih, 2010).

Tacit scaffolding, like notes and background information, caters for other aspects of language development, such as cultural awareness and communication skill (Gan & Humphreys, 2004). It was considered to provide “indirect assistance to learning tasks” (Aaron: 11 May 2016). EFL students thought this scaffolding was less effective for language development, and not directly assisting their accomplishment of learning tasks. Furthermore, information from notes was thought to be “beyond my ability to accept” (David: 11 May 2016). Thus, some of them denied tacit scaffolding in their autonomous EFL learning.

As discussed before, learning tasks were the focus of this group of Chinese university EFL students’ autonomous online learning (see 7.4.3). They employed various resources, including scaffolding, to meet their needs and promote learning. Therefore, explicit scaffolding, whose instructions on learning tasks was described to be “more straightforward” (Alice: 19 May 2016), was more used and preferred by students than those tacit ones.

Being influenced by traditional test-oriented and task-based EFL learning and teaching, Chinese university EFL students put much focus on the accomplishment of learning tasks and correctness rate (see 7.2.3). They expected scaffolded resources could “ensure” their work with learning tasks was “correct” (Julia: 11 May 2016). In terms of this need for scaffolding, explicit type was “frequently employed” (Kent: 12 May 2016) by these participants.

Furthermore, it was found that these test-driven EFL students focused heavily on linguistic knowledge and skill promotion, ignoring some other aspects of language learning, such as ideational, interpersonal, and textual (Halliday, 1978; Ting-Toomey & Chung, 2005; Yu & Wang, 2009). Tacit scaffolding was intentionally abandoned by these students. That largely limited their language development within a small field (Lei & Qin, 2009).

It was noted that some participants in this study had noticed the drawbacks of their excessive employment of explicit scaffolding. They indicated that EFL learning was supposed to be expanded and include more information, for preventing autonomous online learning from turning into “another in-class lecture” (Julia: 11 May 2016). Measures might be needed to draw students’ attention to a wider range of learning, such as meaning expression, information delivery and intercultural communication, rather than task accomplishment exclusively (Dervin & Liddicoat, 2013).

7.5.4 Autonomous use of scaffolding

Although uniform scaffolded resources were provided to all participants learning EFL on the Internet, they were selected and employed in different ways by participants. It was found in this study that participants intentionally made autonomous use of various scaffolded resources, including both soft and hard types, to

serve their individual EFL learning, which might be “different from others, nor the same as my teacher used to recommend” (Alice: 19 May 2016). This was different from previous indications, which have argued that EFL students often used learning resources unintentionally, but followed teacher’s instructions or peer’s modelling (e.g., Casanave, 2004; Chen, 2013; Ng & Cheung, 2017; Shi, 2012).

For example, some participants admitted that they “looked up scaffolded materials before I worked” (Carl: 11 May 2016) in their autonomous learning, while some “only used scaffolded materials when I actually encountered some obstacles in learning” (Bob: 12 May 2016). The differences indicated that these EFL students could incorporate scaffolded resources into their autonomous learning, and put them into practical use for facilitating their language development. It reflected that students were aware that scaffolding should be only provided when they actually needed it (van Lier, 2004). They showed the “signs of self-control and ability to function independently” (Aljaafreh & Lantolf, 1994, p. 468), for scaffolding employment in the autonomous learning. Considering a bigger picture, these participants also showed the signs as autonomous learners in the scene that they could independently evaluate their learning, and find solutions to their learning problems (Garrison & Archer, 2000).

Some participants mentioned that they used to immediately refer to scaffolding when encountering obstacles during their learning process, instead of attempting to

work out a solution by themselves (Eric: 12 May 2016). Scholars have warned that once students are habituated with scaffolding, they may become afraid to study language on their own (King, 2002). EFL students might get accustomed to “the shortcut” (Lydia: 11 May 2016) of language learning, rather than investing time and endeavours. Scaffolding is thus suggested to be wisely and cautiously employed to support students’ language learning, particularly in an autonomous context, for protecting students’ future independent learning and self-regulation in language practice (e.g., Apple & Kikuchi, 2007; Farahian, 2016; Laborda & Heyderman, 2006; Schinke-Llano, 1994).

Participants were also found to frame scaffolded materials into their individual ZPD, by using which they achieved a higher level of EFL learning. For those scaffolded materials that were “far beyond my ability to accept”, participants usually skipped them (Bella: May 18, 2016). EFL students intended to choose scaffolded materials that they could understand and use for practical learning purposes. It reflected that the employment of scaffolding in language learning should take students’ acceptance and current abilities into consideration; that is, scaffolding should be framed into students’ ZPDs (Al-Jaafreh, 1992; Ellis, 2004). Scaffolding was expected to “present the learner with just the right challenge” (Clark & Graves, 2004: p. 571), instead of an additional learning burden.

However, it was found that some participants attempted to put all provided scaffolded materials into use in their online learning. They had noticed that using scaffolding that lay beyond their ZPDs was “burdensome” (Monica: 12 May 2016). It seemed that these students failed to build “a delicate balancing act” of scaffolding and their abilities (Dabbagh, 2003). Scaffolding should always occur in a natural way (van Lier, 2004). Students, who “forced” themselves to employ all scaffolded materials in the learning process usually had “very depressing learning experiences, not satisfying learning outcomes” (Monica: 12 May 2016). It also indicated that these students lacked understanding and experience in autonomous learning, failing to find themselves appropriate materials by taking their current language abilities and learning needs into consideration. Although they had showed some autonomy, such as organizing learning, selecting materials, and evaluating performance, they were still in need of instructions and practices before they could achieve “a higher level of autonomy” (Littlewood, 1999) in the online learning context.

This part discusses Chinese university EFL students’ selection and employment of scaffolding from a wide range of sources to support their autonomous online language learning. Different types of scaffolding with different contents and focuses were not equally used in the learning practice. EFL students’ employment of scaffolding was also noticed in the study, which reflected their awareness of autonomous learning. But it was also noticed that the use of scaffolding should be

careful and cautious. Otherwise, it might lead to unproductive or even harmful outcomes of online EFL learning.

7.6 Chapter summary

Through data and discussions of this chapter, it was found that Chinese university EFL students actively engaged in a CALL context for developing their EFL abilities and knowledge through autonomous learning. They showed some degrees of autonomy in language learning, and accepted online EFL learning as a routine for language development. In their learning practice, they were able to put various learning resources, particularly multimedia learning resources, into use to facilitate their learning. Their selection, organization, and employment of certain types and forms of learning materials and scaffolded resources for EFL learning were not balanced, being largely dependent on their individual preferences, and influenced by their in-class learning experience. Although some measures were adopted by students, their online EFL learning was still negatively impacted by various factors, including distraction, foreign language anxiety, and their selection and employment of learning strategies and styles. These factors impacted their perceptions of and engagement in both independent and interactive learning in an autonomous online context, making their autonomous online learning less effective and efficacy.

Building on these findings, a tentative model for autonomous online EFL learning and teaching is proposed to fulfil Chinese EFL students' language learning needs in

an autonomous online context, and to help them overcome obstacles to achieve better learning outcomes. It will be presented in detail in the next chapter, together with conclusions of this case study, as well as limitations and implications for future research.

Chapter 8 Conclusions and implications

Previous chapters reported and discussed major findings in terms of two research questions that are put forward in the study regarding Chinese university EFL students' online interactive EFL learning. They were analysed and discussed by presenting empirical evidence and referring to relevant literatures under the framework of four key theoretical constructs: learner autonomy, interactive learning, ZPD and scaffolding. Conclusions of these findings are presented and listed in this chapter.

A tentative model of online interactive EFL learning with the incorporation of multimedia resources is proposed in this study, offering a new perspective for English language educators, teachers and students, both in China and in some other Confucian heritage countries with similar foreign language learning and teaching contexts. This area has been neglected in English learning and teaching for a long period of time. Investigation is needed for future development of foreign language education in a technology-supported environment. Contributions of the study are presented in terms of conceptual, theoretical, and methodological implications. Limitations of the present study are also put forward in this chapter.

8.1 Conclusions of the study

The case study focusing on EFL learning and teaching contexts in a Chinese university investigated a group of Chinese university students' perceptions of and engagement in interactive learning on an online learning platform. It addressed two research questions in detail:

RQ1: What are Chinese university EFL students' perceptions of learning EFL in an online interactive context?

RQ2: How does this group of students learn EFL by using multimedia resources in an online interactive context?

A qualitative case study with the support of quantitative descriptions was conducted to investigate Chinese university EFL students' perceptions of and engagement in online interactive EFL learning. Empirical evidence was collected, analysed, and discussed, leading to some major findings regarding foreign language learning in a new CALL context with multimedia resources in China. Conclusions are drawn under the umbrella of a CALL context from a theoretical framework perspective constituted of four strains of theories — learner autonomy, interactive learning, ZPD, and scaffolding — and are presented as follows regarding the twofold research focus.

8.1.1 A broad learning context

A language learning context constitutes a wide range of social and cultural factors that “enable or disable access to learning” for language learners (Lantolf, 2005; Toohey & Norten, 2003, p. 58). The current study investigated Chinese university EFL students' foreign language learning in a CALL context. Findings from the case study indicated that this group of university EFL students had the necessary equipment for online autonomous language learning in their leisure time. They were found to be interested in learning a foreign language in a technology-supported context, as well as prepared to embrace the trend.

Although being widely recognized as a new learning approach and a supplement to traditional language learning (Al-Jarf, 2005; Tseng & Liou, 2006), EFL learning in a CALL

context was found to be treated as a significant part of their formal language practice and development by this group of EFL students. Students invested their time into online EFL learning. With the convenience of technology, their fragmented time was made into full use in EFL learning in a CALL context. It also allowed them to choose a preferred environment for language learning. The CALL context enabled them to overcome time and distance limits in EFL learning.

However, a CALL context for EFL learning was also seen to bring about some challenges for Chinese university students. Even though it provided more engaging resources for online EFL learning, it could also distract students' attention from learning contents. Technology-involved learning might also mislead some students and make itself less formal. Convenience of modern equipment could be a double-edged sword as well. Although some students actively employed strategies, including fragmented-time learning, learning alone, and task-based learning, to counter the flaws of online EFL learning, a CALL context cannot provide a perfect environment for language development. Students did not see it as a priority for EFL learning.

A CALL context could be helpful to create a comfortable and attractive environment for Chinese university students' EFL learning and language development, given the possibility for students to access more learning opportunities and preferred learning resources. Employing a CALL context, cautious of its flaws and potential harms may probably help facilitate the development of Chinese university students' language abilities and linguistic knowledge.

8.1.2 Learner autonomy

Learners with autonomy take charge of their own study (Benson, 2013), as reflected in students' self-regulative and self-initiative learning with less teacher involvement. Language teaching and learning is "an autonomous art" (Quinn, 1974). A considerable number of studies have observed that learner autonomy can lead to satisfactory outcomes in language acquisition (Balçıkanlı, 2008; Little, Ridley, & Ushioda, 2003; Little, 2009; Nakata, 2010). The rise of technology-supported language learning and a CALL context provides a habituated environment for EFL learning, where autonomous learners have access to more social interaction in learning, and therefore develop their language abilities and knowledge (Garrison & Archer, 2000; Murphy, 2007).

Nevertheless, how Chinese university EFL students learn a foreign language autonomously in a CALL context remains under researched, with less on how learner autonomy impacts their learning activities (Chen & Ching, 2011; Gan, 2004). The current study filled the research gap by exploring the role learner autonomy plays in EFL learning in a Chinese university context, focusing on the promotion and enhancement of learner autonomy in a CALL environment.

This study found that Chinese university students were willing to invest their time into autonomous EFL learning, particularly in online language learning. Learning EFL online autonomously after class was widely accepted as a trend among university students in China. In line with previous studies (Garrison & Archer, 2000; Holec, 1981; Little, 2001; Littlewood, 1996), students had certain autonomy in EFL learning, making decisions on learning related issues, including learning aims, materials, strategies, methods and some more complex cognitive processes like planning, monitoring, and evaluating. These EFL learners were also

found to be lifelong language learners, with autonomy promoted them engage in constant learning activities for further development.

In the present study, participants were found to make good use of ICTs and adjust them to suit their autonomous EFL learning. They created their individual learning ecologies with the support of ICTs and employed them as a major source of the learning materials. A CALL context was considered different learning environment from their traditional in-class EFL learning, where their autonomy was largely limited (Cortazzi & Jin, 1996; Zhong & Shen, 2002). Chinese university EFL students adopted personalized strategies in their autonomous EFL learning in a new learning context. Nonetheless, traditional foreign language education is still deeply rooted in these students, and imposed influences on their current learning.

Specifically, in autonomous EFL learning on the Internet, many participants preferred to learn alone, without interacting and cooperating with peers. A widely accepted solitary learning style, which was largely employed in the classroom and required by English teachers (Gu, 2003; Yan & Horwitz, 2008), was continued by students in autonomous online EFL learning. Although the Chinese government and educational institutions recommended to enhance students' "intercultural awareness" through EFL learning (MoE, 2007), students were found to largely abandon abstract and cultural contents in their autonomous learning. Their motivation and interest to learn cultural contents were weak. Instead, they invested more time into contents that were practical and close to life. It was also noticed that compared with language output, EFL students choose more language input practices in their autonomous EFL learning, particularly in a resource-rich online context.

The present study found that learner autonomy was supported and exercised in online language learning contexts, which allowed Chinese university EFL students to develop their language abilities and linguistic knowledge independently and continuously. Participants were shown to enjoy an increasing level of autonomy and could employ it to serve their individual EFL learning. However, they still faced some challenges in autonomous EFL learning, and could not make full use of it. Their awareness of autonomous language learning should be further developed, and appropriate strategies should be adopted in a new online learning context.

8.1.3 Interactive learning

Interaction is considered as a significant contributor to language acquisition (Krashen, 1985). Interaction in learning “is expected to promote negotiation of meaning, and if it does so, this should be beneficial for language acquisition” (Chapelle, 2003, p. 56). Interactive learning is usually used as a learning approach to effectively enhance foreign language learning (Craig, 2006; Redmann, 2005; Salca, Moldovan, Orza, & Vlaicu, 2013; Tian & Suppasetserree, 2013; Williams & Pilonieta, 2012). The proposal of interactive learning has brought a new approach for students’ autonomous language practice and development (Kötter, 2001; Little, 2001). The current study explored Chinese university EFL students’ autonomous interactive EFL learning in an online CALL context with support of ICTs.

The study found that ICTs created a low-stress and comfortable CALL context for EFL students’ autonomous language learning. Compared with the traditional face-to-face in-class learning environment, online learning encouraged students to take a more autonomous role in interaction. ICTs provided opportunities for some students to display their learning achievements in front of peers and teachers, while it also enabled some of them to withdraw

from participation safely due to the use of anonymity. Interaction was considered as one of the biggest beneficiaries of online language learning (Swan et al., 2000). Online interactive learning was employed as an effective approach for Chinese university EFL students to develop their language abilities and knowledge. Active engagement in online interactive learning was observed in the study.

Interactive EFL learning was not fully accepted by some participants. Although autonomous online interactive learning was different from its traditional in-class counterpart in that it provided abundant opportunities of student-centred contents for students, it was refused by some EFL students for various reasons. Some students considered it as a low-efficient approach for language learning. Some suffered from foreign language anxiety, and were unwilling to interact with peers or teachers in English. L1 mediation in interaction was also a concern of some participants, who simply treated it as a threat to EFL learning, failing to recognize the language learning as a cognitive tool of knowledge construction and ignoring the potential of L1 mediation for EFL development (Lantolf & Thorne, 2006; Swain & Lapkin, 2000).

In autonomous interactive learning, Chinese university EFL students were found to focus on grammatical and lexical correctness, without paying much attention to meaning expression and intercultural communication. They were deeply influenced by their traditional language learning and teaching (Gao, 2007), continuing as test-driven EFL students in autonomous learning. Meaningful interactive language learning was largely neglected in their autonomous online learning, imposing potential threats to language acquisition.

Modelling was found to be a significant part of Chinese university EFL students' autonomous interactive learning. It was considered as a necessity for most participants in interactive learning. Modelling not only improved students' language skills and knowledge, but also developed their metacognitive awareness (Berggren, 2013). It was a key part of language learning, particularly at the early stage of participants' online interactive learning in a new context. It should be also noted that students employed imitation as a strategy to develop their own individual learning, instead of a simple repetition of peers' work.

The current study indicated that students intended to familiarize with the learning procedure when learning in a new CALL context. Familiarity of learning procedure benefited both students' participation and their performance in autonomous interactive learning. It was also seen that some participants might evade from learning otherwise. Familiarity was a key contribution to students' decisions in autonomous interactive learning (McDonough & Sunitham, 2009; Wang, 2014).

ICTs created a habituated CALL context for autonomous online interactive EFL learning for Chinese university students. It overcame some obstacles seen in the traditional in-class environment, including foreign language anxiety, teacher-centered approaches and insufficient opportunities, and provided a low-stress context and abundant opportunities to encourage more students to take a more active part in interaction. However, it should not be neglected that autonomous online interactive EFL learning was not perfect. Students insisted on traditional test-oriented strategies in interactive learning, ignoring meaningful interaction and communication. Some failed to recognize the value of L1 mediation in interactive learning, and described it as a low-efficient way for language development. The study also

showed the value of imitation and modelling in autonomous interactive learning, and the appropriate use of anonymity in different contexts.

8.1.4 ZPD

ZPD is defined as “the distance between a child’s actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under guidance or in collaboration with more capable peers” (Vygotsky, 1986, p. 86). It is employed and has constructive and instructive functions in EFL learning and teaching (Lantolf, 2000; Lantolf & Poehner, 2008; Lantolf & Thorne, 2006). It was a key theoretical construct in the current study, that played a role in facilitating Chinese university EFL students’ autonomous online language learning.

Participants of the present study were found to be able to find their individual ZPDs independently in autonomous EFL learning in an online context, where they could find themselves materials with appropriate difficulty and effectiveness. Language learning that was framed within students’ ZPDs allowed for satisfying learning outcomes as well. Students’ learning motivation and potentiality were also strong when learning in their individual ZPDs. Providing EFL students with learning contents that could be incorporated within their ZPDs was beneficial to facilitating or accelerating their language development.

Regarding learning materials that were framed in their ZPDs, this group of participants were found to be in favour of and accepted multimedia as their major materials of autonomous language learning in a CALL context. Multimedia were found to be a satisfying source for students to obtain authentic and updated information, which was demanded by students in autonomous EFL learning. Multimedia materials that were incorporated in

students' ZPDs were also attractive for them, for motivating them to engage in autonomous EFL learning actively. Multimedia learning material were accepted and employed as useful tools for autonomous language learning in a CALL context.

Learning strategies need to be built depending on students' learning contexts and corresponding resources (Cohen, 2003; 2007; Grabe, 2004). For effectively employing multimedia resources to develop their language abilities and knowledge in their ZPDs, students were found to adopt an appropriate strategy to coordinate with various multimedia resources. Nonetheless, it should be noted that the traditional influence was still strong so that some participants stuck to previous learning strategies used in the classroom, without considering their suitability in a new CALL context.

Learning task is a key part in ZPD, so that a learner could "progress through the ZPD by attempting successive approximations of the learning task" (McLoughli et al., 1999, p. 1) with the help and support of others. The current study found that Chinese university EFL students listed learning tasks as their priority in autonomous language learning. They employed various available resources in their learning process to serve their need for accomplishment of learning tasks that were within their ZPDs. Although learning EFL in a new CALL context through digital devices, they did not make many changes to the task-completion strategy that was widely used in a traditional EFL learning context.

The construct of ZPD provides a guide for evaluating EFL students' performance and outcomes. In this autonomous online learning context, participants were found to employ various resources for self-evaluation of their learning performance and outcomes, including teachers, peers, learning materials and tasks, and scaffolded materials. Self-evaluation in

online EFL learning was dynamic, focusing both on EFL students' current learning performance, and their future development. The traditional teacher-controlled evaluation was thus transferred to students in the autonomous EFL learning context, where ICTs provided assistance to students' evaluation.

It should not be neglected that participants in autonomous EFL learning still faced some challenges related with their ZPDs in their learning process. Participants encountered "information redundancy" (Goh & Aryadoust, 2015) in autonomous learning in a resource-rich context, from where it might be difficult for some of them to spot their ZPDs and select appropriate materials for learning. Multimedia resources, even those within students' ZPDs, could still distract their attention during the learning process. Measures were thus suggested to be adopted to cope with such challenges in a CALL context, where autonomous language learners had to face them independently.

ZPD played an instructive and guiding role in Chinese university EFL students' autonomous language learning in an online context that it enabled them to spot their potentiality and so motivated them to engage in language learning actively. Multimedia resources that were framed in students' ZPD could provide students with their preferred learning materials, as well as effectively facilitate their language learning. Tasks in students' ZPD were their priority in autonomous EFL learning, and various resources were employed to serve task-based learning. ZPD acted as a guide for students' self-evaluation in autonomous learning in a resource-rich context. Students also encountered some challenges regarding ZPD, which might harm their autonomous EFL learning.

8.1.5 Scaffolding

Scaffolding plays an important role in language learning and teaching — it is directly used to enhance language skills and knowledge in English language learning and teaching (Attarzadeh, 2011; Burch, 2007; Nguyen, 2013; Storch, 2002, 2007). This group of EFL students were found to change their way of obtaining scaffolding in language learning, from a passive receiver from teachers in the classroom, to an active seeker in autonomous learning. They purposefully and largely employed scaffolding in their learning practices, addressing specific questions and achieving learning goals in an autonomous context (Ellis, 2004). Scaffolding was thought necessary for autonomous EFL learning, particularly for those difficult contents. It could enable students to do what “she or he might not have been able to do otherwise” (Ohta, 2000, p. 52). Scaffolding was used as a helpful tool to bridge the gap between students’ current language level and their goals, and motivated them to overcome learning obstacles.

Regarding scaffolded materials, it was found from the current study that not all materials were accepted and welcomed by EFL students equally in their autonomous learning. Explicit scaffolding that directly helped students solve learning tasks was significantly more preferred in autonomous EFL learning, while tacit scaffolding that was of indirect helpfulness for task accomplishment and was less employed. Participants’ preferences of scaffolding in the current study indicated the deep influence of traditional test-oriented language learning and teaching that put focus on grammatical and lexical correctness. Measures might be needed to draw students’ attention to other aspects of learning, such as meaning expression, information delivery and intercultural communication, rather than task accomplishment exclusively.

The present study noticed that both teacher and peer scaffolding were widely employed in autonomous EFL learning, and effectively helped students achieve their learning goals. In

students' autonomous EFL learning, teacher scaffolding was expected. When provided with teacher scaffolding, students actively engaged in learning. The teacher was treated as a major source of scaffolding both in traditional learning context and in the autonomous one. Peer scaffolding was also believed to be helpful for language development. Personal view-making was meaningful to language knowledge construction and development in autonomous learning, as well as encouraging more peers to engage in learning.

The autonomous employment of scaffolding was found in this study in participants' online EFL learning. Students made different uses of various scaffolded resources, including both soft and hard, on the basis of their current language abilities and learning needs. By employing scaffolding, they targeted their individual learning, and found solutions to their personal learning problems as autonomous learners.

Participants of the study were also found to frame scaffolding into their individual ZPD for online EFL learning. Being assisted by the scaffolding, they could achieve a higher level of language development. However, some of these EFL students failed to take their current language abilities and learning needs into consideration when selecting and using scaffolding. This might lead to additional learning burdens, unproductive learning outcomes, and negative learning experiences in an autonomous online context.

8.2 An online interactive EFL learning model for Chinese learners

A tentative model of online interactive EFL learning for Chinese university students' foreign language learning is thus proposed from the conclusions arrived at from major findings and the combination of theoretical constructs of the present study.

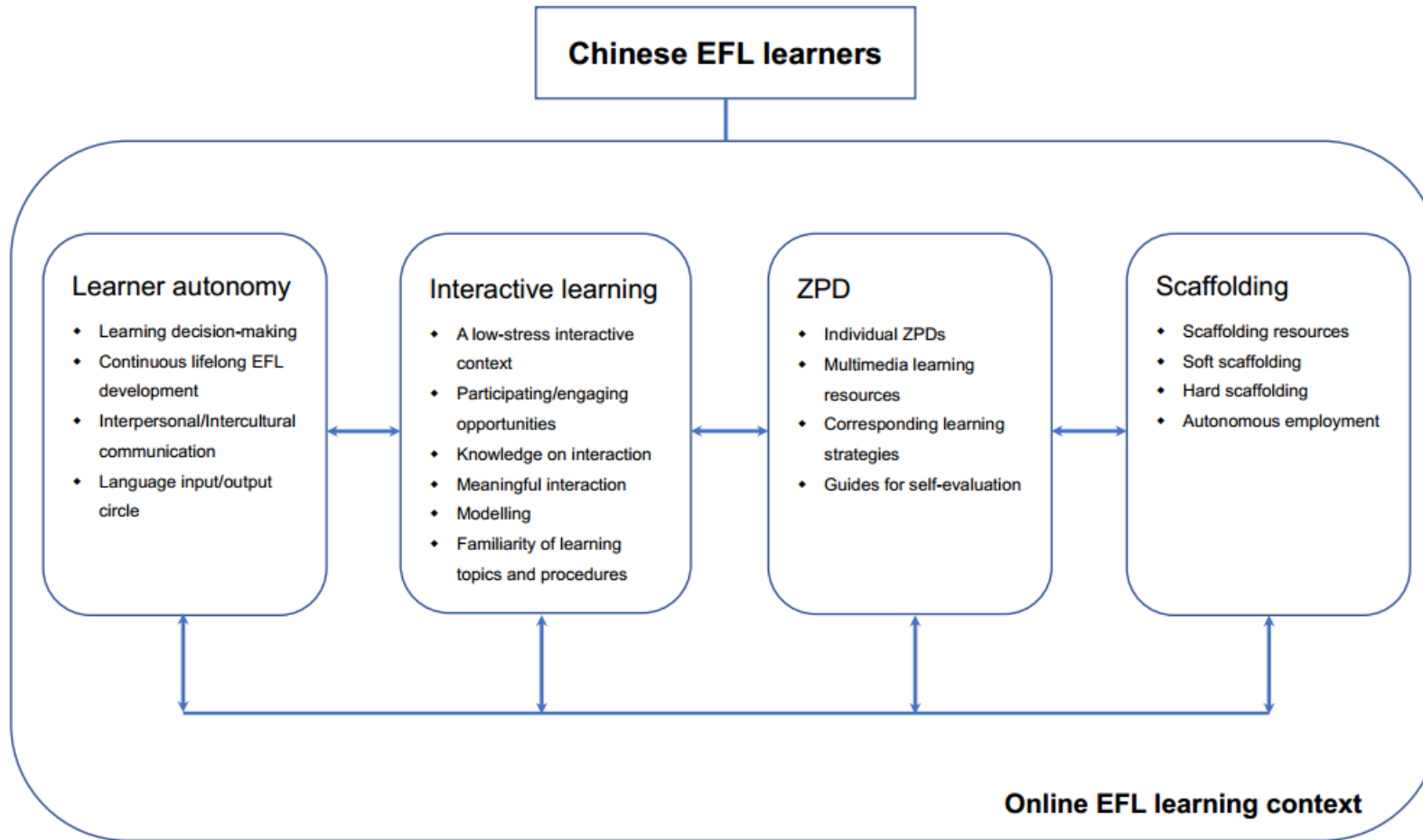


Figure 8. 1. A tentative model of online interactive EFL learning

The square stands for an online EFL learning context, where Chinese university EFL students could participate and engage in interactive language learning autonomously. This learning context could be accessed by students via the Internet through their digital devices, such as computers, tablets, and mobile phones. It comprises of various learning resources, including multimedia learning materials, learning tasks, corresponding scaffolding and opportunities for interaction. They are organized in various forms of texts, images, audios, videos, and puzzles. It is an independent learning context from students' traditional in-class learning environment, aiming at providing an autonomous EFL learning platform for students' after-class language learning and practice.

Inside the square, a recursive learning model is proposed. Four sectors of online EFL learning, i.e., learner autonomy, interactive learning, ZPD, and scaffolding, are organized in the model. It is EFL students themselves who are taking control of the online EFL learning. All learning resources are organized to serve their individual learning needs.

Within the flexible design of the recursive model, EFL students could choose to start at any sector within the framework. Students are allowed to review their learning at any time during the process, and then make decisions on their next learning. Unlike in a traditional linear learning context, EFL students do not need to follow a fixed learning order to move between the four sectors, nor need to complete all learning contents within a sector at a time when learning in this recursive learning model. Instead, students are encouraged to decide their learning-related issues, including learning contents, strategies, practiced skills and employed resources, on the basis of their own situations.

These four sectors jointly shape a recursive learning model for Chinese university EFL students' autonomous interactive EFL learning in an online CALL context with the support of multimedia resources. The following sections explain and discuss details of this learning model.

8.2.1 A CALL context

Chinese university EFL students are expected to have an open mind to frame CALL and online language learning into their formal language learning setting. They should employ the new learning approach as a way to serve their routine language learning and development.

In learning practice, EFL students are supposed to employ online language learning to achieve their learning goals that cannot be done in a traditional context. Learning in an online context via digital resources, these language students can access learning with less concerns about time and location limits. They are supposed to have more learning opportunities that enable exposure to the target language. A positive learning experience is expected as EFL students learn in a different context, where they suffer less from stress and anxiety, and enjoy the convenience and attractiveness of the learning.

Chinese university EFL students are expected to use CALL and online learning as an approach to facilitate their linguistic knowledge and skill improvement, and long-term intellectual development. These students should free themselves from focusing exclusively on language tests, but expand their language learning to a broader context via online EFL education.

8.2.2 Learner autonomy

EFL students, particularly those Chinese university EFL students, who are habituated with the traditional teacher-centred lecture mode for language learning and development, are suggested to transfer their role in EFL learning from a passive information receiver to a more active language knowledge constructor. They are advised to be more independent and autonomous in an online EFL learning context, making learning-related decisions on the basis of their own situations with less teacher involvement. As for educators, they are supposed to create more space for EFL students. It could encourage them to leverage their autonomy, and to apply it to language development in an online context. Educators also need to pay attention to students' constant language development and long-term intellectual development within their individual learning ecology in a well-rounded way.

Regarding students' language development, their interpersonal and intercultural awareness should be equally important with their linguistic skills. They are advised to nurture both awareness of culture and linguistic abilities in online EFL learning. Students are also encouraged to engage in social interaction for language development via online EFL learning.

EFL students are supposed to develop their knowledge on language input and output, which should be a complete cycle to function effectively for students' language ability improvement. Students need to balance language input and output practices in their autonomous online EFL learning.

8.2.3 Interactive learning

Online EFL learning is supposed to create a low-stress context with abundant opportunities for students to actively engage in interaction with peers, teachers, and others. It is supposed to provide interactive learning resources, which can be easily accessed by EFL

students, for their autonomous language learning and practice. Online EFL learning is expected to play a role to promote students' interactive learning motivation and interest that its traditional counterparts can hardly achieve.

Regarding EFL students, they are suggested to get actual engagement in interactive learning activities, rather than just attending. There is a need for EFL students to improve their knowledge on interactive language learning. They are supposed to develop their knowledge on this learning approach, and have the awareness of appropriate methods to deal with learning obstacles and doubts occurring in the interaction process. EFL students are also expected to conduct meaningful interaction with others, by which they are able to access essential language practices and ability development for EFL learning.

Modelling is expected, particularly at the early stage of students' engagement in interaction, for the purpose of familiarizing with both learning procedure and interactive topics. It is of necessity for online EFL learning to provide various examples for students' interaction, and display the whole learning procedure at the beginning of learning. Students will have a complete picture prior to their commencement of learning, upon which they could make better plans for their learning progress.

8.2.4 ZPD

It is of importance for online EFL learning to provide students with abundant learning resources that can be incorporated within their individual ZPD, which enables them to find out the most appropriate materials in accordance with their varied situations to serve their individualized learning. Necessary guides on learning materials are suggested as well, for helping students to locate their individual ZPD.

It should be beneficial to take advantage of modern ICTs and create an integrative CALL context for EFL students' autonomous online EFL learning. That is expected to provide students with attractive student-centred learning resources, carrying authentic and new EFL learning contents in various forms, including audios and videos, games, and interactive materials, to serve both linguistic skill build-up and intercultural awareness development. These materials can motivate EFL students to invest themselves into language learning and enjoy constant language ability development. They can be delivered to students via the Internet. Students, by using digital devices such as computers, mobile phones, and tablets, should be able to access learning without being limited by time and location.

Traditional forms of learning materials, such as texts, audios, and instructional contents, are suggested to be incorporated into online EFL learning as well to collaborate with online resources, for creating multi-dimensional learning for EFL students' language development. It is supposed to bridge students' traditional EFL learning and their autonomous online learning. The merger of traditional forms of materials for EFL learning into online learning approaches enables students to enjoy the merits of learning resources in various forms.

Upon employing both traditional and digital forms of learning materials into EFL students' autonomous online learning, corresponding strategies should be deployed. EFL students are expected to adopt appropriate strategies to serve their varied learning needs and to help them achieve their individualized learning goals. When learning in an online context, EFL students are suggested to not limit themselves with traditional strategies, like skimming, memorizing, dictionary note-taking. Some more recently recognized ones, like visual, auditory, meaning-oriented, activation, contextual and rehearsal, which can play a role with

the use of new forms of materials, are expected to be incorporated in the learning model. To build appropriate strategies for EFL students according to their metacognitive awareness in an online learning context is advised.

Self-evaluation is advised to be integrated into EFL learning as it provides a reference for students to realize their learning progress and to make plans for the next phase of learning. EFL students are expected to employ various learning resources that lie within their ZPDs, including materials, tasks, and scaffolding, for self-evaluation. It enables them to have a picture of their current learning performance. On the basis of the evaluation, students can also plan their learning to achieve a higher level of learning in their individual ZPD for language development.

8.2.5 Scaffolding

Regarding the irreplaceable role scaffolding plays in EFL learning, particularly for the autonomous one, it is necessary to incorporate scaffolding to help students reach a higher level of foreign language development within their ZPDs. With scaffolding, EFL students can bridge the learning gap between their current language abilities and their targets that lie in their ZPDs (Ohta, 2000). Autonomous online EFL learning is suggested to incorporate abundant scaffolded resources and make them accessible for EFL students via the Internet.

Both forms of scaffolding, the hard and the soft, are beneficial to EFL students' linguistic ability build-up and language knowledge development (Burch, 2007; Nguyen, 2013; Storch, 2002, 2007). They should be incorporated into EFL learning and provide students with necessary help to leverage their language abilities to a target degree within their ZPDs.

EFL students are expected to develop their language learning by autonomously using scaffolded resources. They need to decide their scaffolding forms and contents for their current language abilities and individual learning needs, and receive scaffolding via an accessible way when learning EFL on the Internet. In the learning practice, EFL students are also expected to take their current language abilities into consideration. They should frame the scaffolding in their individual ZPD to assist them to achieve a higher level of EFL learning.

Online EFL learning should provide scaffolding in a natural way (van Lier, 2004). Incorporated scaffolding should be fadeable, and be only provided when students actually need it. It is advised to leave enough space for students' independent endeavours, and to leverage students' responsibilities in an autonomous learning context. Measures are also expected to be taken to guide students to use scaffolding appropriately.

EFL students, when learning on the Internet, need to be cautious with scaffolding. They are advised to actively increase their autonomy in learning, and gain more independence, rather than relying on scaffolding. Students should consciously face challenges in learning and attempt to regulate their learning actions. When using scaffolding, they need to pay more attention to their constant language development, instead of focusing on current learning tasks.

Overall, this recursive online EFL learning model could be used to provide some insights of Chinese university EFL students' autonomous language learning and systematically conceptualize an ideal learning context for them. This model provides EFL students with an autonomous language learning and practicing context, where students play a core role in

learning and make decisions on all learning-related issues. It incorporates learner autonomy and interactive learning, and highlights the effects of ZPD and scaffolding in online language learning. It provides a tentative and workable model for conducting autonomous online language learning in China, as well as other Confucian heritage countries with similar contexts. It may also inspire future research on online EFL learning and teaching, as well as foreign language education in general.

8.3 Limitations and contributions of the study

8.3.1 Limitations

A case study design, as pointed out by researchers (Stake, 2008; Wang, 2015), owns its limitation of generalization. A total of 154 EFL students from a Chinese university participated in the study. However, the university was just one of the first-tier universities in China's higher education system. Findings from these participants, who all came from this university, might not be enough for generalization. The proposed EFL learning model need to be further tested and refined.

8.3.2 Conceptual contribution

8.3.2 Conceptual contribution

At the conceptual level, this study was one of the first attempts to systematically examine EFL students' autonomous language learning via an online interactive learning platform in a Chinese university. Learners were able to access a number of audio-visual learning materials and tasks, and had opportunities to interact with each other in the process of exposure and interaction for task completion in an emergent context. Compared with the traditional lecture mode of learning and teaching, this innovative mode helped effectively facilitate learner autonomy and reciprocal communication in learning that provided valuable reference for future studies.

This study yielded learner-focused insights into online EFL learning, as well as information about Chinese university students' autonomous language learning. It provided an in-depth description and interpretation of this innovative EFL learning approach. It also gained information about EFL students' diverse autonomous learning actions, as well as their preferences and dislikes in online learning. In this light, this study contributes to knowledge construction in research on Chinese university EFL students' perceptions of and engagement in online language learning, as well as to provide a big picture of the employment and practice of online EFL education in a Chinese university context.

8.3.3 Theoretical contribution

At the theoretical level, the quadrangle framework incorporates a number of theoretical constructs of learner autonomy, interactive learning, ZPD and scaffolding in the theoretical framework to investigate Chinese university EFL students' perceptions of and engagement in learning EFL in an online interactive learning context. It contributes to the theorization of autonomous EFL learning and teaching from these four perspectives.

This study obtained insights into the development and practice of students' learner autonomy in an EFL learning context. It focused on EFL students' independent decision-making in EFL learning as autonomous learners. Participants' selection and employment of available learning resources to tailor their individual learning, including both linguistic skill build-up and intercultural and interpersonal communication, were also noticed in this study. It examined learner autonomy in a Chinese university EFL learning context, developing the theory and expanding its boarder.

The theorization of online interactive EFL learning in a Chinese university context was achieved in this study. It deepened the understanding and enriched the literature of interactive language learning. It focused on the employment of interactive learning, and its impacts on students' learning actions and outcomes. This provided insights into the role of interactive EFL learning plays in foreign language learning, and EFL students' needs and expectations of it for language development.

This study has contributed to theory building of ZPD in EFL learning and teaching as well, particularly in a Chinese university context. It focused on EFL students' individual ZPD, on the base of which, to find out the appropriate materials and corresponding strategies for language development in an online context that suited for their own situations. It also investigated the guiding effects of ZPD on students' self-evaluation in an autonomous learning environment.

The study enriched the theory of scaffolding in EFL learning and teaching context. It provided an in-depth description of students' autonomous selection and employment of both hard scaffolding and soft scaffolding in online EFL learning. It also noticed the differences between students' practices with teacher scaffolding and peer scaffolding, while it confirmed the impacts on EFL learning of both types. This study also provided insights into students' uses of scaffolding, for displaying both the positive and negative impacts of scaffolding on their EFL learning in an online context.

The formed quadrangle theoretical framework is also being envisaged to provide a conceptual base to guide the research design and methodology innovation, leading to the theorization of the research findings as they arise. It may also be applied to examine the

online EFL learning in similar Confucian heritage contexts, for example, Korea, Japan and Singapore to name a few.

8.3.4 Methodological contribution

At the methodological level, this study employed a case study under the umbrella theory of social constructivism to investigate Chinese university EFL students' perceptions of and engagement in online language learning. It showed that social constructivism was able to provide a solid base for research on foreign language learning and teaching and other similar fields.

This study also displayed the employment of case study methodology in the research field of EFL learning and teaching. Case study has been widely used in research on EFL learning across the world (e.g., Chou, 2014; Chu, 2008; Jung & Lee, 2013), but less has been conducted that focuses on autonomous online EFL learning in a Chinese university context. The current one explored students' autonomous online EFL learning in this context by employing a case study design. It demonstrated that a case study could be used to serve a study that put its focus on a specific learning context. A case study also proved to validate to reflect students' perceptions, as well as to describe their learning actions in the context, which contributed to the knowledge construction of the case study design.

Various methods for data collection were employed in this case study. A questionnaire, focus groups, individual face-to-face interviews, and documents were administered to gather both qualitative and quantitative data for illustrate students' autonomous online EFL learning. Multiple data sources were adopted in the study to ensure the validation and accuracy of the collected data. Both self-reported data, including the questionnaire and interviews, and

documented evidence were collected. Data from different sources via different approaches collaborated with each other to triangulate the findings of the study, and provided empirical evidence for research on Chinese university EFL students' autonomous online language learning.

An added contribution of this thesis is that it is envisaged that such a model informed by a combination of four stands of theories and a set of empirical data distinctive of the Chinese university EFL learning in an online environment, is highly replicable to teaching and learning English as a foreign language in similar contexts.

References

- Abdullah, M. R. T. L., Hussin, Z., Asra, & Zakaria, A. R. (2013). MLearning scaffolded model for undergraduate English language learning: Bridging formal and informal learning. *TOJET: The Turkish Online Journal of Educational Technology*, 12(2), 217-233.
- Abedin, B., Daneshgar, F., & D'Ambra, J. (2011). Enhancing non-task sociability of asynchronous CSCL environments. *Computers & Education*, 57(4), 2535-2547.
- AbuSeileek, A. F. (2012). The effect of computer-assisted cooperative learning methods and group size on the EFL learners' achievement in communication skills. *Computers & Education*, 58(1), 231-239.
- Alemi, M., Meghdari, A., & Haeri, N. S. (2017, November). Young EFL learners' attitude towards RALL: An observational study focusing on motivation, anxiety, and interaction. In *International Conference on Social Robotics*(pp. 252-261). Springer, Cham.
- Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the Zone of Proximal Development. *The Modern Language Journal*, 78(4), 465-483.
- Al - Jarf, R. S. (2004). The effects of Web - Based learning on struggling EFL college writers. *Foreign Language Annals*, 37(1), 49-57.
- Allen, C., Hadjistassou, S. K., & Richardson, D. (2016). Self-evaluation using iPads in EFL teaching practice. *CALL communities and culture—short papers from EUROCALL 2016 Edited by Salomi Papadima-Sophocleous, Linda Bradley, and Sylvie Thou šny*, 20.
- Almekhlafi, A. G. (2006). The effect of computer assisted language learning (CALL) on United Arab Emirates English as a foreign language (EFL) school students' achievement and attitude. *Journal of Interactive Learning Research*, 17(2), 121.
- Alrabai, F. (2017). Exploring the unknown: The autonomy of Saudi EFL learners. *English Language Teaching*, 10(5), 222-233.
- Alshahrani, A. (2016). Communicating authentically: Enhancing EFL students' spoken English via videoconferencing. *CALL-EJ*, 17(2), 1-17.
- Alshammari, R., Parkes, M., & Adlington, R. (2017). Using WhatsApp in EFL instruction with Saudi Arabian university students. *Arab World English Journal*, 8(4).
- Anwar, K., & Husniah, R. (2016). Evaluating integrated task-based activities and Computer-Assisted Language Learning (CALL). *English Language Teaching*, 9(4), 119.

-
- Arifani, Y., Rosyid, H., Husniah, R., & Paulina, P. (2018). Mentoring English senior high school teachers in EFL reading class using collaborative pamanpintermu at SMAM Bungah Gresik. *Kontribusia (Research Dissemination for Community Development)*, 1(1), 17-21.
- Attarzadeh, M. (2011). The effect of scaffolding on reading comprehension of various text modes on Iranian EFL learners with different proficiency levels. *Social Sciences and Humanities*, 2(4), 1-28.
- Azari, M. H. (2017). Effect of weblog-based process approach on EFL learners' writing performance and autonomy. *Computer assisted language learning*, 30(6), 529-551.
- Bahrani, T., & Sim, T. S. (2011). The role of audiovisual mass media news in language learning. *English Language Teaching*, 4(2), 260-266.
- Bahrani, T., & Sim, T. S. (2012). Informal language learning setting: Technology or social interaction? *TOJET: Turkish Online Journal of Educational Technology*, 11(2), 142-149.
- Balçıkanlı, C. (2008). Fostering learner autonomy in EFL classrooms. *Kastamonu Education Journal*, 16(1), 277-284.
- Bani-Hani, N. A., Al-Sobh, M. A., & Abu-Melhim, A. R. H. (2014). Utilizing Facebook groups in teaching writing: Jordanian EFL students' perceptions and attitudes. *International Journal of English Linguistics*, 4(5), 27.
- Barnard, R., & Campbell, L. (2005). Sociocultural theory and the teaching of process writing: The scaffolding of learning in a university context. *The TESOLANZ Journal*, 13, 76-88.
- BavaHarji, M., Alavi, Z. K., & Letchumanan, K. (2014). Captioned instructional video: Effects on content comprehension, vocabulary acquisition and language proficiency. *English Language Teaching*, 7(5), 1-16.
- BavaHarji, M., Gheitanchian, M., & Letchumanan, K. (2014). The effects of multimedia task-based language teaching on EFL learners' oral L2 production. *English Language Teaching*, 7(4), 11.
- Başaran, B. Ç. (2013). Attitudes of EFL teachers and learners towards CALL in Turkey. In *Conference proceedings. ICT for language learning* (pp. 143-149). libreriauniversitaria. it Edizioni.
- Benson, P. (2001). *Teaching and researching autonomy in language learning*. Harlow, England: Longman.
- Benson, P. (2013). Learner autonomy. *Tesol Quarterly*, 47(4), 839-843.

-
- Benson, P., & Lor, W. (1998). *Making sense of autonomous language learning: Conceptions of learning and readiness for autonomy*. English Centre Monograph, No. 2 (Research Report). Hong Kong, China: University of Hong Kong.
- Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. Arlington, VA: International Society for Technology in Education.
- Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research, 79*(3), 1243-1289.
- Betts, G. (2004). Fostering autonomous learners through levels of differentiation. *Roeper Review, 26*(4), 190-191.
- Beven, F. A. (2010). *Metacognitive structuring while learning with hypermedia* (Doctoral dissertation). Retrieved from <http://research-hub.griffith.edu.au/display/naf0c7fb91a06ca3013124dc644ba0cb4>
- Bhattacharya, A., & Chauhan, K. (2010). Augmenting learner autonomy through blogging. *ELT Journal, 64*(4), 376-384.
- Blin, F. (2004). CALL and the development of learner autonomy: Towards an activity-theoretical perspective. *ReCALL, 16*(2), 377-395.
- Bolton, K., & Graddol, D. (2012). English in China today: The current popularity of English in China is unprecedented, and has been fuelled by the recent political and social development of Chinese society. *English Today, 28*(3), 3-9.
- Brooke, M. (2013). Facilitating the development of the autonomous language learner using online virtual learning environments. *Theory and Practice in Language Studies, 3*(4), 572.
- Brown, A., & Green, T. D. (2006). *The essentials of instructional design: Connecting fundamental principles with process and practice*. New York, NY: Pearson.
- Brown, S. A., Fuller, R. M., & Vician, C. (2004). Who's afraid of the virtual world? Anxiety and Computer-Mediated Communication. *Journal of the Association for Information Systems, 5*(2), 79-107.
- Brush, T. A., & Saye, J. W. (2002). A summary of research exploring hard and soft scaffolding for teachers and students using a multimedia supported learning environment. *The Journal of Interactive Online Learning, 1*(2), 1-12.

-
- Buckingham, D., & Willett, R. (2006). *Digital generations: Children, young people and new media*. New York, NY: Routledge.
- Buendía Arias, X. P. (2015). A comparison of Chinese and Colombian university EFL students regarding learner autonomy. *Profile Issues in Teachers Professional Development*, 17(1), 35-53.
- Burch, J. R. (2007). *A study examining the impact of scaffolding young children's acquisition of literacy in primary grades* (Doctoral dissertation). Retrieved from http://etd.lsu.edu/docs/available/etd-04132007-101339/unrestricted/Burch_dis.pdf
- Cai, L. J. (2017). Students' Perceptions of Academic Writing: A Needs Analysis of EAP in China. *Asian-Focused ELT Research and Practice: Voices from the Far Edge*, 127.
- Canning-Wilson, C., & Wallace, J. (2000). Practical aspects of using video in the foreign language classroom. *The Internet TESL Journal*, 6(11), 36-31.
- Campbell, A., Brown, I., & Weatherford, Y. (2008). A CALL project with low-level EFL students. In *3rd World CALL International Conference, Fukuoka, Japan*.
- Castaño, J., Duart, J. M., & Sancho-Vinuesa, T. (2015). Determinants of Internet use for interactive learning: an exploratory study. *Journal of New Approaches in Educational Research*, 4(1), 24-31,25-27,31-34A.
- Cengiz, B. C., Seferoğlu, G., & Günseli Kaçar, I. (2017, October). EFL teachers' perceptions about an online CALL training: A case from Turkey. In *The EuroCALL Review* (Vol. 25, No. 2, pp. 29-37). Universitat Politècnica de València.
- Cercone, K. (2008). Characteristics of adult learners with implications for online learning design. *AACE journal*, 16(2), 137-159.
- Chambers, A., & Davies, G. (2001). *ICT and language learning: A European perspective*. Lisse, Netherlands: Swets & Zeitlinger Publishers.
- Chan, V. (2001). Readiness for learner autonomy: What do our learners tell us? *Teaching in Higher Education*, 6(4), 505-518.
- Chan, V. (2003). Autonomous language learning: The teachers' perspectives. *Teaching in Higher Education*, 8(1), 33-54.
- Chan, W. M., Chi, S. W., Chin, K. N., & Lin, C. Y. (2011). Students' perceptions of and attitudes towards Podcast-based learning – A comparison of two language Podcast projects. *Electronic Journal of Foreign Language Teaching*, 8(Suppl. 1), 312–335.

-
- Chan, T. P., & Liou, H. C. (2005). Effects of web-based concordancing instruction on EFL students' learning of verb–noun collocations. *Computer assisted language learning*, 18(3), 231-251.
- Chang, C.-W., Pearman, C., & Farha, N. (2012). Second Language Acquisition: Implications of web 2.0 and beyond. *Critical Questions in Education*, 3(2), 52 - 64.
- Chang, L. Y. H. (2007). The influence of group processes on learners' autonomous beliefs and behaviors. *System*, 35(3), 322-337.
- Chang, M. M., & Lehman, J. D. (2002). Learning foreign language through an interactive multimedia program: An experimental study on the effects of the relevance Component of the ARCS Model. *CALICO Journal*, 20(1), 81.
- Chapelle, C. A. (2003). *English language learning and technology*. Amsterdam, Netherland: John Benjamins.
- Chapelle, C. A., Cotos, E., & Lee, J. (2015). Validity arguments for diagnostic assessment using automated writing evaluation. *Language testing*, 32(3), 385-405.
- Chen, H. (1988). *Computer assisted writing in Taiwan: Methods and perspectives*. Proceedings of the the Fifth Conference on English Teaching and Learning in the Republic of China, 173-191.
- Chen, M. L. (2012). Effects of integrating children's literature and DVD films into a college EFL class. *English Teaching-Practice and Critique*, 11(4), 88-98.
- Chen, Y. L., & Ching, G. S. (2011, March). Enhancing Cross-Cultural Openness of Taiwanese EFL Students' through Online Blog Readings. In *Society for Information Technology & Teacher Education International Conference* (pp. 2386-2392). Association for the Advancement of Computing in Education (AACE).
- Hsieh, J. S. C., Wu, W. C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, 30(1-2), 1-21.
- Cheng, R. (2010). Computer-mediated scaffolding in L2 students' academic literacy development. *CALICO Journal*, 28(1), 74-98.
- Chik, A. (2018). Learner Autonomy and Digital Practices. In *Autonomy in Language Learning and Teaching* (pp. 73-92). Palgrave Pivot, London.
- Chu, H. N. R. (2008). *Shyness and EFL learning in Taiwan: A study of shy and non-shy college students' use of strategies, foreign language anxiety, motivation, and willingness to communicate* (Doctoral dissertation). Retrieved from

<https://repositories.lib.utexas.edu/bitstream/handle/2152/3864/chuh41126.pdf?sequence=2&isAllowed=y>.

- Clark, C. M. (2006). Hello learners: Living social constructivism. *Teaching Education, 10*(1), 89-110.
- Codreanu, T., & Celik, C. C. (2013). Effects of webcams on multimodal interactive learning. *ReCALL, 25*(01), 30-47.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. NJ: L. Erlbaum Associates.
- Cohen, L., Manion, L., & Morrison, K. (2009). *Research methods in education*. New York, NY: Routledge.
- Cole, A. D. (2006). Scaffolding beginning readers: Micro and macro cues teachers use during student oral reading. *Reading Teacher, 59*, 450–459.
- Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, Learning, and Instruction: Essays in Honor of Robert Glaser* (pp. 347–361). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Conttia, L. M. W. (2007). *The influence of learner motivation on developing autonomous learning in an English-for-Specific-Purposes course* (Master's thesis). Retrieved from <http://hub.hku.hk/bitstream/10722/51769/6/FullText.pdf?accept=1>
- Craig, S. (2006). The effects of an adapted interactive writing intervention on kindergarten children's phonological awareness, spelling, and early reading development: A contextualized approach to instruction. *Journal of Educational Psychology, 98*(4), 714-731.
- Crotty, M. (1998). *Foundations of social research: Meaning and perspective in the research process*. Sydney, Australia: Allen & Unwin.
- Dai, W.D. (2001). On further improving English language learning in China – Suggestions for consideration (in Chinese). *Foreign Languages and their Teaching, 7*, 1 & 32.
- Dang, N.T. (2011). *Exploring CALL options for teaching EFL in Vietnam*. (Master's thesis). Retrieved <https://cornerstone.lib.mnsu.edu/cgi/viewcontent.cgi?article=1272&context=etds>.
- Dashtestani, R. (2014). Computer literacy of Iranian teachers of English as a foreign language: Challenges and obstacles. *International Journal of Pedagogies and Learning, 9*(1), 87-100.
- De Guerrero, M. C., & Villamil, O. S. (2000). Activating the ZPD: Mutual scaffolding in L2 peer revision. *The Modern Language Journal, 84*(1), 51-68.

-
- Dehaan, J., Johnson, N. H., Yoshimura, N., & Kondo, T. (2012). Wiki and digital video use in strategic interaction-based experiential EFL Learning. *CALICO Journal*, 29(2), 249-268.
- Denscombe, M. (2014). *The good research guide: For small-scale social research projects*. Berkshire, England: McGraw-Hill Education.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research*. Thousand Oaks: CA: SAGE Publications.
- Dervin, F., & Liddicoat, A.J. (2013). Linguistics for intercultural education. In F. Dervin & A. J. Liddicoat (Eds.), *Linguistics for intercultural education in language learning and teaching* (pp. 1-25). Amsterdam: John Benjamins.
- Dewiyanti, S., Brand-Gruwel, S., Jochems, W., & Broers, N. J. (2007). Students' experiences with collaborative learning in asynchronous Computer-Supported Collaborative Learning environments. *Computers in Human Behavior*, 23(1), 496-514.
- Dinh, H. (2018). Teachers' Uses and Beliefs in the Integration of YouTube Videos Into English Language Teaching: A Comparison Between ESL and EFL Contexts. In *Applications of CALL Theory in ESL and EFL Environments* (pp. 94-110). IGI Global.
- Doğan, G., & Mirici, İ. H. (2017). EFL instructors' perception and practices on learner autonomy in some Turkish universities. *Journal of Language and Linguistic Studies*, 13(1), 166-193.
- Donato, R. (1994). Collective scaffolding in second language learning. In James P. Lantolf & G. Appel (Eds.), *Vygotskian Approaches to Second Language Research* (pp. 33-56). Santa Barbara, CA: Greenwood Publishing Group.
- Ducate, L. C., & Lomicka, L. L. (2008). Adventures in the blogosphere: From blog readers to blog writers. *Computer Assisted Language Learning*, 21(1), 9-28.
- Ehrman, M. E., & Dörnyei, Z. (1998). *Interpersonal dynamics in second language education: The visible and invisible classroom*. Thousand Oaks, CA: Sage Publications.
- Ellis, R. (1985). *Understanding second language acquisition*. Oxford, England: Oxford University Press.
- Ellis, R. (1999). *Learning a second language through interaction*. Amsterdam, Netherlands: John Benjamins.
- Eneau, J., & Develotte, C. (2012). Working together online to enhance learner autonomy: Analysis of learners' perceptions of their online learning experience. *ReCALL*, 24(01), 3-19.

-
- Enfield, J. (2013). Looking at the impact of the flipped classroom model of instruction on undergraduate multimedia students at CSUN. *TechTrends*, 57(6), 14-27.
- Engin, M. (2014). Extending the flipped classroom model: Developing second language writing skills through student-created digital videos. *Journal of the Scholarship of Teaching and Learning*, 14(5), 12-26.
- Englert, C. S., Zhao, Y., Dunsmore, K., Collings, N. Y., & Wolbers, K. (2007). Scaffolding the writing of students with disabilities through procedural facilitation: Using an Internet-based technology to improve performance. *Learning Disability Quarterly*, 30(1), 9-29.
- Erfani, S. S., & Nikbin, S. (2015). The effect of peer-assisted mediation vs. tutor-intervention within dynamic assessment framework on writing development of Iranian intermediate EFL learners. *English Language Teaching*, 8(4), 128-141.
- Eskandari, M., & Soleimani, H. (2016). The effect of collaborative discovery learning using MOODLE on the learning of conditional sentences by Iranian EFL learners. *Theory and Practice in Language Studies*, 6(1), 153.
- Etemadi, A. (2012). Effects of bimodal subtitling of English movies on content comprehension and vocabulary recognition. *International Journal of English Linguistics*, 2(1), 239-248.
- Fahrutdinova, R. A., Yarmakeev, I. E., & Fakhrutdinov, R. R. (2014). The formation of students' foreign language communicative competence during the learning process of the English language through interactive learning technologies (The study on the basis of Kazan Federal University). *English Language Teaching*, 7(12), 36-46.
- Fan, S. (2011). *Significance of the web as a learning resource in an Australian university context* (Doctoral dissertation). Retrieved from http://eprints.utas.edu.au/11713/1/Si_Fan_PhD_Thesis.pdf.
- Fang, F., & Zhang, L. (2012). Teachers' roles in promoting students' learner autonomy in China. *English language teaching*, 5(4), 51.
- Farahian, M. (2016). Poor EFL Learners' Metacognitive Reading Strategies: A Case Study. *International Journal of Applied Linguistics and English Literature*, 5(1), 272-280.
- Farivar, A., & Rahimi, A. (2015). The impact of CALL on Iranian EFL learners' autonomy. *Procedia-Social and Behavioral Sciences*, 192, 644-649.
- Farrokh, P. (2018). The Effect of Learners' Autonomous Textbook Selection on Intermediate Iranian EFL Learners' Speaking Ability. *Chinese Journal of Applied Linguistics*, 41(1), 101-119.

-
- Fay, M. P., & Proschan, M. A. (2010). Wilcoxon-Mann-Whitney or t-test? On assumptions for hypothesis tests and multiple interpretations of decision rules. *Stat Surv*, 4, 1-39.
- Fang, F., & Zhang, L. (2012). Teachers' roles in promoting students' learner autonomy in China. *English Language Teaching*, 5(4), 51-56.
- Feng, T. (2015). Assessing learner autonomy and EFL vocabulary acquisition: A case study. *Beyond Words*, 3(1), 78-99.
- Finch, A. (2013). Caring in English: ESP for nurses. *International Journal of English Language Teaching*, 1(1), 1.
- Fleer, M. (1992). Identifying teacher-child interaction which scaffolds scientific thinking in young children. *Science & Education*, 76, 373-397.
- Freiermuth, M. R. (2002). Connecting with computer science students by building bridges. *Simulation & Gaming*, 33(3), 299-315.
- Fulton, K. P. (2013). Byron's flipped classrooms. *Education Digest*, 79(1), 22.
- Fumin, F., & Li, Z. (2012). Teachers' roles in promoting students' learner autonomy in China. *English Language Teaching*, 5(4), 51-56.
- Gabel, C. (2011). *Effectiveness of a scaffolded approach for teaching learners to design scientific inquiries* (Doctoral dissertation). Available from ProQuest Dissertations Publishing. (UMI No. 3007746).
- Gagne, R. M., Wager, W. W., Golas, K. C., & Keller, J. M. (2005). *Principles of instructional design*. Belmont, CA: Wadsworth Publishing Co Inc.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. New York, NY: Pearson.
- Gamper, J., & Knapp, J. (2002). A review of intelligent CALL systems. *Computer Assisted Language Learning*, 15(4), 329-342.
- Gan, Z., Humphreys, G., & Hamp - Lyons, L. (2004). Understanding successful and unsuccessful EFL students in Chinese universities. *The modern language journal*, 88(2), 229-244.
- Gan, Z., Liu, F., & Yang, C. C. R. (2017). Assessment for learning in the Chinese context: Prospective EFL teachers' perceptions and their relations to learning approach. *Journal of Language Teaching and Research*, 8(6), 1126-1134.

-
- Gao, J. (2007). Teaching writing in Chinese universities: Finding an eclectic approach. *Asian EFL Journal*, 20(2), 285-297.
- Gao, X., Barkhuizen, G., & Chow, A. W. K. (2011). Research engagement and educational decentralisation: Problematising primary school English teachers' research experiences in China. *Educational Studies*, 37(2), 207-219.
- Garrison, D. R., & Archer, W. (2000). *A transactional perspective on teaching and learning: A framework for adult and higher education*. Oxford, England: Pergamon Press.
- Ge, J., Xiong, C. P., & Xiong, Y. P. (2016). Proposal and Evaluation of an SNS-Based Model for Learning of English as a Foreign Language. In *International Conference on Blending Learning* (pp. 163-174). Springer, Cham.
- Gladwin, R. E., & Stepp-Greany, J. (2008). An interactive, instructor-supported reading approach vs. traditional reading instruction in Spanish. *Foreign Language Annals*, 41(4), 687-701.
- Goh, C. C., & Aryadoust, V. (2015). Examining the notion of listening subskill divisibility and its implications for second language listening. *International journal of listening*, 29(3), 109-133.
- González López, P. A. (2018). Vclass, a virtual homework strategy to reinforce and improve the English communicative skills of EFL young learners.
- Grgurović, M., Chappelle, C. A., & Shelley, M. C. (2013). A meta-analysis of effectiveness studies on computer technology-supported language learning. *ReCALL*, 25(02), 165-198.
- Gros, B. (2001). Instructional design for Computer-Supported Collaborative Learning in primary and secondary school. *Computers in Human Behavior*, 17(5-6), 439-451.
- Gu, W. & Liu, J. (2005). Test analysis of college students' communicative competence in English. *Asian EFL Journal*, 7(2), 7.
- Hadjikoteva, M., & Neykova, M. (2017). Mobile applications in foreign language teaching. *E-Newsletter*, 102.
- Hajebi, M., Taheri, S., Fahandezh, F., & Salari, H. (2018). The role of web-based language teaching on vocabulary retention of adult pre-intermediate EFL learners. *Journal of Language Teaching and Research*, 9(2), 372-378.
- Han, T., & Keskin, F. (2016). Using a mobile application (WhatsApp) to reduce EFL speaking anxiety. *Gist: Education and Learning Research Journal*, (12), 29-50.

-
- Han, J., & Yin, H. (2016). College English curriculum reform in Mainland China: Contexts, contents and changes. *Asian Education Studies*, 1(1), 1.
- Hammond, J., & Gibbons, P. (2001). What is scaffolding? In J. Hammond (Ed.), *Scaffolding Teaching and Learning in Language and Literacy Education* (pp. 1-14). Newtown, N.S.W: PETA.
- Harmon, J. M., Wood, K. D., & Kiser, K. (2009). Promoting vocabulary learning with the interactive word wall. *Middle School Journal*, 40(3), 58-63.
- Harvey, J. (2011). *A sociocultural-theory-based study of the impact of mediation during post-observation conferences on language teacher learning* (Doctoral dissertation). Retrieved from <http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=4922&context=etd>
- Haryati, H. (2018, April). EFL students' perspectives of applying CALL through project-based learning. In *UICELL Conference Proceeding* (No. 1).
- Hayati, A., & Mohmedi, F. (2011). The effect of films with and without subtitles on listening comprehension of EFL learners. *British Journal of Educational Technology*, 42(1), 181-192.
- Hazaea, A. N., & Alzubi, A. A. (2016). The effectiveness of using mobile on EFL learners' reading practices in Najran University. *English language teaching*, 9(5), 8.
- He, C., & Han, F. (2018). A study of EFL curriculum of China's science and technology institutes under graded teaching model. *English Language Teaching*, 11(2), 44.
- Herrera Mosquera, L. (2017). Impact of implementing a Virtual Learning Environment (VLE) in the EFL classroom. *Ķala, revista de lenguaje y cultura*, 22(3), 479-498.
- Hidri, S. (2017). Specs validation of a dynamic reading comprehension test for EAP learners in an EFL context. In *Evaluation in foreign language education in the Middle East and North Africa* (pp. 315-337). Springer, Cham.
- Holec, H. (1981). *Autonomy and foreign language learning*. Oxford, England: Pergamon Press.
- Hu, G. (2005). 'CLT is best for China'—an untenable absolutist claim. *ELT journal*, 59(1), 65-68.
- Hu, G. (2005). English language education in China: Policies, progress, and problems. *Language policy*, 4(1), 5-24.
- Hu, P. (2016). The role of basic need satisfaction in English learning: A case study at a university in China. *Linguistics and Literature Studies*, 4(6), 402-411

-
- Hu, Z., & McGrath, I. (2011). Innovation in higher education in China: Are teachers ready to integrate ICT in English language teaching?. *Technology, Pedagogy and Education*, 20(1), 41-59.
- Huang, J. (2011). 跨国实时交互语言课堂的学习环境研究——基于学习者反馈的调查. *Foreign Languages and Their Teaching*. 257, 57-61.
- Huang, H. C., Chern, C. L., & Lin, C. C. (2009). EFL learners' use of online reading strategies and comprehension of texts: An exploratory study. *Computers & Education*, 52(1), 13-26.
- Huang, H. C., & Eskey, D. E. (2000). The effects of closed-captioned television on the listening comprehension of intermediate English as a second language students. *Journal of Educational Technology Systems*, 28(1), 75-96.
- Huang, F., Hoi, C. K. W., & Teo, T. (2018). The influence of learning style on English learning achievement among undergraduates in Mainland China. *Journal of psycholinguistic research*, 1-16.
- Huang, H. T. D., & Hung, S. T. A. (2013). Exploring the utility of a video - based online EFL discussion forum. *British Journal of Educational Technology*, 44(3).
- Huang, S. Y., Lee, M. H., & Hsiao, C. K. (2009). Nonlinear measures of association with kernel canonical correlation analysis and applications. *Journal of Statistical Planning and Inference*, 139(7), 2162-2174.
- Hung, H. T. (2009). Learners' perceived value of video as mediation in foreign language learning. *Journal of Educational Multimedia and Hypermedia*, 18(2), 171-190.
- Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education*, 55(3), 1080-1090.
- Hüseyin, Ö. Z. (2014). Teachers' and students' perceptions of interactive whiteboards in the English as a foreign language classroom. *TOJET: The Turkish Online Journal of Educational Technology*, 13(3), 156-177.
- Hwang, J. (2018). *The use of a mobile instant messaging (MIM) application for English interaction in the Korean EFL context* (Doctoral dissertation). Retrieved from <https://opus.lib.uts.edu.au/bitstream/10453/123273/1/01front.pdf>.
<https://opus.lib.uts.edu.au/bitstream/10453/123273/2/02whole.pdf>.
- Hwang, Y., & Huang, P. (2011). Using subtitles to enliven reading. *English Language and Literature Studies*, 1(1), 2-6.

-
- Hyland, F. (2000). ESL writers and feedback: giving more autonomy to students. *Language Teaching Research*, 4(1), 33-54.
- Inozu, J. (2011). Developing learner autonomy in the language class in Turkey: voices from the classroom. *Asia Pacific Education Review*, 12(4), 523-531.
- Ismail, N., Singh, D. S. R., & Abu, R. (2013). Fostering learner autonomy and academic writing interest via the use of structured e-forum activities among ESL students. *Edulearn13 Proceedings*, 4622-4626.
- Isman, A., & Dabaj, F. (2005). Diffusion of distance education in North Cyprus. *Turkish Online Journal of Distance Education*, 6(4), 59-65.
- Ito, M., Horst, H., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P. G., . . . Robinson, L. (2008). *Living and learning with new media: Summary of findings from the Digital Youth Project*. Retrieved from https://www.macfound.org/media/article_pdfs/DML_ETHNOG_WHITEPAPER.PDF
- Jenkins, J. (2000). *The phonology of English as an international language*. Oxford, England: Oxford University Press.
- Jiang, L. (2018). Digital multimodal composing and investment change in learners' writing in English as a foreign language. *Journal of Second Language Writing*, 40, 60-72.
- Jiménez, A. A., & Pantoja, B. T. (2008). Scaffolding tutoring strategy on virtual environments for training. *Ingeniare : Revista Chilena de Ingeniería*, 16(2), 220-231.
- Jimenez, F., & Kanoh, M. (2012, November). Change in learning ability using scaffolding in EFL vocabulary learning system. In *Soft Computing and Intelligent Systems (SCIS) and 13th International Symposium on Advanced Intelligent Systems (ISIS), 2012 Joint 6th International Conference on* (pp. 604-609). IEEE.
- Jin, L., & Cortazzi, M. (2006). Changing practices in Chinese cultures of learning. *Language, Culture and Curriculum*, 19(1), 5-20.
- Johnson, G. B. (2013). *Student perceptions of the flipped classroom* (Master's thesis). Retrieved from https://circle.ubc.ca/bitstream/handle/2429/44070/ubc_2013_spring_johnson_graham.pdf?sequence=1
- Jung, R., & Lee, C. H. (2013). Using Internet video clips for university students' vocabulary development in blended learning. *Multimedia-Assisted Language Learning*, 16(4), 67-96.

-
- Kabiri, M., Nosratinia, M., & Mansouri, M. (2018). The Relationship between EFL Learners' Autonomy, Anxiety, and Their Motivated Strategies for Learning. *Journal of Applied Linguistics and Language Research*, 5(1), 253-268.
- Kageto, M., Sato, S., & Kirkpatrick, G. (2012). How to enhance self-directed EFL learning in an authentic international collaborative learning. *International Journal for Educational Media and Technology*, 6(1), 76-84.
- Karim, Z., & Jamila, M. (2018). CALL to MALL: Shifting paradigm in Bangladeshi universities. *Journal of English Language and Literature*, 9(1), 747-752.
- Kember, D. (1997). A reconceptualisation of the research into university academics' conceptions of teaching. *Learning and Instruction*, 7(3), 255-275.
- Kettle, M., Yuan, Y., Luke, A., Ewing, R., & Shen, H. (2012). The pedagogical, linguistic and content features of popular English Language Learning websites in China: A framework for analysis and design. *Frontiers of Education in China*, 7(4), 534-552.
- Kerr, S. J. (2002). *Scaffolding: Design issues in single & collaborative virtual environments for social skills learning*. Paper presented at the Workshop on Virtual Environments Switzerland, Zurich, Switzerland.
- Khaliliaqdam, S. (2014). ZPD, scaffolding and basic speech development in EFL context. *Procedia-Social and Behavioral Sciences*, 98, 891-897.
- Khassawneh, S. F. (2012). EFL teachers' perceptions and perspectives on the use of the Internet in the teaching progress at Yarmouk University in Jordan. *European Scientific Journal, ESJ*, 8(13), 143-160.
- Khodamoradi, A., Iravani, H., & Jafarigohar, M. (2013). The effect of teacher's scaffolding and peers' collaborative dialogue on the acquisition of English tenses in the Zone of Proximal Development: A sociocultural perspective. *European Online Journal of Natural and Social Sciences*, 2(2s), 336-346.
- Khoshsima, H., & Sayadi, F. (2016). The effect of virtual language learning method on writing ability of Iranian intermediate EFL learners. *Advances in Language and Literary Studies*, 7(2), 192-202.
- King, J. (2002). Preparing EFL learners for oral presentations. *Dong Hwa Journal of Humanistic Studies*, 4, 401-418.

-
- Kim, N. Y. (2018). CALL and MALL: Effects on foreign language writing and impacts on perceptions of language learning. *응용언어학*, 34(1), 143-167.
- Kim, D., & Gilman, D. A. (2008). Effects of text, audio, and graphic aids in multimedia instruction for vocabulary learning. *Educational Technology & Society*, 11(3), 114-126.
- Knapp, T. R. (1978). Canonical correlation analysis: A general parametric significance-testing system. *Psychological Bulletin*, 85(2), 410-416.
- Kock, N. (2015). One-tailed or two-tailed P values in PLS-SEM? *International Journal of e-Collaboration*, 11(2), 1-7.
- Kondo, M., Ishikawa, Y., Smith, C., Sakamoto, K., Shimomura, H., & Wada, N. (2012). Mobile Assisted Language Learning in university EFL courses in Japan: Developing attitudes and skills for self-regulated learning. *ReCall*, 24(2), 169-187.
- Kötter, M. (2001). Developing distance language learners' interactive competence – Can synchronous audio do the trick? *International Journal of Educational Telecommunications*, 7(4), 327-353.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. Beverly Hills, CA: Laredo Publishing.
- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: SAGE Publications.
- Kruskal, W. H., & Wallis, W. A. (1952). Use of ranks in one-criterion variance analysis. *Journal of the American Statistical Association*, 47(250), 583-621.
- Kuo, Y. C., Chu, H. C., & Huang, C. H. (2015). A learning style-based grouping collaborative learning approach to improve EFL students' performance in English courses. *Journal of Educational Technology & Society*, 18(2), 284-298.
- Kurita, T. (2012). Issues in second language listening comprehension and the pedagogical implications. *Accents Asia*, 5(1), 30-44.
- Lai, C., & Gu, M. (2011). Self-regulated out-of-class language learning with technology. *Computer assisted language learning*, 24(4), 317-335.
- Lak, M., Soleimani, H., & Parvaneh, F. (2017). The effect of teacher-centeredness method vs. learner-centeredness method on reading comprehension among Iranian EFL learners. *Journal of Advances in English Language Teaching*, 5(1), 1-10.

-
- Lan, Y. J., Sung, Y. T., Cheng, C. C., & Chang, K. E. (2015). Computer-supported cooperative prewriting for enhancing young EFL learners' writing performance. *Language Learning & Technology, 19*(2), 134-155.
- Lankshear, C., & Knobel, M. (2008). *Digital literacies: Concepts, policies and practices*. New York, NY: Peter Lang.
- Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford, England: Oxford University Press.
- Lantolf, J. P., & Appel, G. (1994). *Vygotskian approaches to second language research*. Santa Barbara, CA: Greenwood Publishing Group.
- Lantolf, J. P., & Poehner, M. E. (2008). *Sociocultural theory and the teaching of second languages*. London, England: Equinox.
- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford, England: Oxford University Press.
- Lear, E. L. (2012). *The effectiveness of guided reflective journals as autonomous learning tools to develop intelligible features of pronunciation in large English as an international language classes* (Doctoral dissertation). Retrieved from <http://research-hub.griffith.edu.au/display/n7a8d0fe4503dc27b590dbf5b9f584cee>
- Lee, L. (2016). Autonomous learning through task-based instruction in fully online language courses. *Language Learning & Technology, 20*(2), 81-97.
- Leis, A., Tohei, A., & Cooke, S. (2015). Smartphone assisted language learning and autonomy. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 5*(3), 75-88.
- Leow, F. T., & Neo, M. (2014). Interactive multimedia learning: innovating classroom education in a Malaysian university. *TOJET : The Turkish Online Journal of Educational Technology, 13*(2), 99-110.
- Li, D. (2017). Autonomy in Scaffolding as Learning in Teacher-Student Negotiation of Meaning in a University EFL Classroom. *Chinese Journal of Applied Linguistics, 40*(4), 410-430.
- Li, R. (2012). The influence of computer applied learning environment on EFL or ESL education. *Theory and Practice in Language Studies, 2*(1), 187-191.
- Li, J., & Li, M. (2018). Language teaching and technology forum. *Language Learning & Technology, 22*(1), 27-41.

-
- Li, L., & Walsh, S. (2011). Technology uptake in Chinese EFL classes. *Language teaching research, 15*(1), 99-125.
- Li, L., & Walsh, S. (2011). 'Seeing is believing': looking at EFL teachers' beliefs through classroom interaction. *Classroom discourse, 2*(1), 39-57.
- Li, M., X. Yang, G. Feng, M. Wu, J. Chen & G. Hu (2008). 大规模大学英语口语测试朗读题型机器阅卷可行性研究与实践. *Foreign Language World, 127*, 88-95.
- Liardét, C. L. (2013). An exploration of Chinese EFL learner's deployment of grammatical metaphor: Learning to make academically valued meanings. *Journal of Second Language Writing, 22*(2), 161-178.
- Liao, H. C. (2016). Enhancing the grammatical accuracy of EFL writing by using an AWE-assisted process approach. *System, 62*, 77-92.
- Liaw, S. S., Huang, H. M., & Chen, G. D. (2007). Surveying instructor and learner attitudes toward e-learning. *Computers & Education, 49*(4), 1066-1080.
- Lieberman, S. (2013). Using Facebook as an interactive learning environment in European political studies. *European Political Science, 13*(1), 23-31.
- Lim, C. J., & Lee, S. (2007). Pedagogical usability checklist for ESL/EFL e-learning websites. *Journal of Convergence Information Technology, 2*(3), 67-76.
- Lim, K. M., & Shen, H. Z. (2006). Integration of computers into an EFL reading classroom. *ReCALL, 18*(2), 212-229.
- Lin, C., & Tseng, Y. (2012). Videos and animations for vocabulary learning: A study on difficult words. *TOJET: Turkish Online Journal of Educational Technology, 11*(4), 346-355.
- Lipponen, L. (2002). *Exploring foundations for computer-supported collaborative learning*. Paper presented at the Conference on Computer Support for Collaborative Learning: Foundations for a CSCL Community. Retrieved from <http://sistemas-humano-computacionais.wdfiles.com/local--files/capitulo%3Acolaboracao-auxiliada-por-computador/cscl-foundations.pdf>.
- Little, D. (1995). The dependence of learner autonomy on teacher autonomy. *System, 23*(2), 175-181.
- Little, D. (2001). Learner autonomy and the challenge of tandem language learning via the Internet. In A. Chambers & G. Davies (Eds.), *ICT and Language Learning: A European Perspective* (pp. 29-38). Lisse, Netherlands: Swets & Zeitlinger Publishers.

-
- Little, D. (2009). Language learner autonomy and the European Language Portfolio: Two L2 English examples. *Language Teaching*, 42(02), 222.
- Little, D., Ridley, J., & Ushioda, E. (2002). *Towards greater learner autonomy in the foreign language classroom: Report on a research-and-development project (1997-2001)* (Research Report). Dublin, Ireland: Authentik.
- Littlewood, W. (1996). "Autonomy": An anatomy and a framework. *System*, 24(4), 427-435
- Littlewood, W. (1999). Defining and developing autonomy in East Asian contexts. *Applied Linguistics*, 20(1), 71-94.
- Liu, M. H. (2012). Discussing teaching videocases online: Perspectives of preservice and inservice EFL teachers in Taiwan. *Computers & Education*, 59(1), 120-133.
- Liu, S. H. J., & Yu-Ju, L. (2016). Social constructivist approach to web-based EFL learning: Collaboration, motivation, and perception on the use of Google Docs. *Journal of Educational Technology & Society*, 19(1), 171.
- Liu, Q., Zhou, X., & Fu, D. (2015). Native-English speaking instructors teaching writing in China. *Changing English*, 22(1), 99-111.
- Lizzio, A., Wilson, K. & Simons, R. (2002). University students' perceptions of the learning environment and academic outcomes: Implications for theory and practice. *Studies in Higher Education*. 27(1), 27-52.
- Long, M. H. (1996). The role of linguistic environment in second language acquisition. In C. Ritchie, T. Bhatia, & K. Bhatia (Eds.), *Handbook of Second Language Acquisition* (pp. 413-468). San Diego, CA: Academic Press.
- Lu, J., Throssell, P., & Jiang, H. (2013). Exploring the application of computer-assisted English learning in a Chinese Mainland context: Based on students' attitudes and behaviours. *International Journal of English Linguistics*, 3(3), 31-41.
- Luckin, R., & Boulay, B. D. (1999). Ecolab: The development and evaluation of a Vygotskian design framework. *International Journal of Artificial Intelligence in Education*, 10(2), 198-220.
- Maftoon, P., Hamidi, H., & Sarem, S. N. (2015). The effects of CALL on vocabulary learning: A case of Iranian intermediate EFL learners. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 3(4), 19-30.

-
- Mak, T. (2014). *A case study: Task-based language teaching in a Chinese foreign language context* (Master's thesis). Retrieved from <http://hub.hku.hk/bitstream/10722/209655/1/FullText.pdf?accept=1>.
- Malik, F. A., Asraf, R. M., Othman, K., & Muhamad, A. J. EFL pre-university students' readiness for learner autonomy: Does culture matter? *The Asian EFL Journal Professional Teaching Articles*, 101, 83-95.
- Markham, P., & Peter, L. (2003). The influence of English language and Spanish language captions on foreign language listening/reading comprehension. *Journal of Educational Technology Systems*, 31(3), 331-341.
- Marsh, J. (2005). *Popular culture, new media and digital literacy in early childhood*. London, England: Routledge.
- Marzban, A. (2011). Improvement of reading comprehension through computer-assisted language learning in Iranian intermediate EFL students. *Procedia Computer Science*, 3, 3-10.
- Mazman, S. G., & Usluel, Y. K. (2010). Modeling educational usage of Facebook. *Computers & Education*, 55(2), 444-453.
- McCarrier, A., Pinnell, G. S., & Fountas, I. C. (2000). *Interactive writing: How language and literacy come together, K-2*. Portsmouth, NH: Heinemann.
- McKay, S. L. (2002). *Teaching English as an international language: Rethinking goals and perspectives*. New York, NY: Oxford University Press.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Hoboken, NJ: John Wiley & Sons.
- Ministry of Education of China. (2004). *College english curriculum requirements (for trial implementation)*. Shanghai, China: Shanghai Foreign Education Press.
- Ministry of Education of China. (2007). *College english curriculum requirements*. Beijing, China: Foreign Language Teaching and Research Press.
- Ministry of Education of China. (2018). *China's Standards of English Language Ability*. Beijing, China: National Languages Committee.
- Miyazoe, T., & Anderson, T. (2010). Learning outcomes and students' perceptions of online writing: Simultaneous implementation of a forum, blog, and wiki in an EFL blended learning setting. *System*, 38(2), 185-199.

-
- Mo, H. (2012). A study of the teaching of ESL writing in colleges in China. *International Journal of English Linguistics*, 2(1), 118.
- Montero Perez, M., Peters, E., & Desmet, P. (2013). Is less more? Effectiveness and perceived usefulness of keyword and full captioned video for L2 listening comprehension. *ReCALL*, 26(01), 21-43.
- Morgan, L. (2012). Generation Y, learner autonomy and the potential of Web 2.0 tools for language learning and teaching. *Campus-Wide Information Systems*, 29(3), 166-176.
- Morino, A., Lopez, E., & Ono, Y. (2017, March). Effects of a Digital Storytelling Project on Japanese EFL Learners' CALL Attitudes and Awareness of CALL Tasks. In *Society for Information Technology & Teacher Education International Conference* (pp. 367-373). Association for the Advancement of Computing in Education (AACE).
- Murphy, L. (2007). *Autonomous distance language learning: Supporting critical reflection, interaction and decision-making*. Paper presented at the Independent Learning Association 2007 Japan Conference: Exploring Theory, Enhancing Practice: Autonomy Across the Disciplines, Chiba, Japan. Retrieved from http://www.independentlearning.org/uploads/100836/ILA2007_029.pdf.
- Mustafa, R. F. (2012). Feedback on the feedback: Sociocultural interpretation of Saudi ESL learners' opinions about writing feedback. *English Language Teaching*, 5(3), 3-15.
- Mutlu, A., & Eroz-Tuga, B. (2013). The role of computer-assisted language learning (CALL) in promoting learner autonomy. *Eurasian Journal of Educational Research*, 51, 107-122.
- Nakata, Y. (2006). *Motivation and experience in foreign language learning*. Oxford, UK: Peter Lang.
- Nakata, Y. (2010). Towards a framework for self-regulated language-learning. *TESL Canada Journal*, 27(2), 1-10.
- Nakata, Y. (2011). Teachers' readiness for promoting learner autonomy: A study of Japanese EFL high school teachers. *Teaching and Teacher Education*, 27(5), 900-910.
- Neuman, W. L. (2010). *Social research methods: Qualitative and quantitative approaches*. New York, NY: Pearson.
- Nguyen, L. V. (2009). The triangular issues in multimedia language courseware design in the Vietnamese EFL environment. *Asian Social Science*, 4(6), 65.
- Nguyen, M. H. (2013). EFL students' reflections on peer scaffolding in making a collaborative oral presentation. *English Language Teaching*, 6(4), 64-73.

-
- Nguyen, L. T. C., & Gu, Y. (2013). Strategy-based instruction: A learner-focused approach to developing learner autonomy. *Language Teaching Research*, 17(1), 9-30.
- Nokelainen, P. (2006). An empirical assessment of pedagogical usability criteria for digital learning material with elementary school students. *Educational Technology & Society*, 9(2), 178-191.
- Nosratinia, M., & Zaker, A. (2014). Metacognitive attributes and liberated progress: The association among second-language learners' critical thinking, creativity, and autonomy. *SAGE Open*, 4(3).
- Noytim, U. (2010). Weblogs enhancing EFL students' English language learning. *Procedia - Social and Behavioral Sciences*, 2(2), 1127-1132.
- Nunan, D. (1995). Closing the gap between learning and instruction. *Tesol Quarterly*, 29(1), 133-158.
- Nunan, D. (1996). Towards autonomous learning: Some theoretical, empirical and practical issues. In R. Pemberton, E. S. L. Li, W. W. F. Or, & H. D. Pierson (Eds.), *Taking Control: Autonomy in Language Learning* (pp. 13-26). Hong Kong, China: Hong Kong University Press.
- Ocampo, M. B. (2017). Perceived anxiety of English learner and teacher in a CALL environment. *PEOPLE: International Journal of Social Sciences*, 3(2), 1209-1226.
- Ockert, D. (2018). Using a tablet computer for EFL positive self-review: Increases in self-determination theory-based learning motives. *Calico Journal*, 35(2), 182-199.
- Ohta, A. S. (2000). Rethinking interaction in SLA: Developmentally appropriate assistance in the Zone of Proximal Development and the acquisition of L2 grammar. In J. P. Lantolf (Ed.), *Sociocultural Theory and Second Language Learning* (pp. 51-78). Oxford, England: Oxford University Press.
- Oliver, K., & Hannafin, M. J. (2000). Student management of web-based hypermedia resources during open-ended problem solving. *The Journal of Educational Research*, 94(2), 75-92.
- Omar, H., Embi, M. A., & Yunus, M. M. (2012). ESL learners' interaction in an online discussion via Facebook. *Asian Social Science*, 8(11), 67.
- Palincsar, A. S. (1991). Scaffolded instruction of listening comprehension with first graders at risk for academic difficulty. In A. McKeough & J. L. Lupart (Eds.), *Toward the Practice of Theory-Based Instruction* (pp. 50-65). Sydney, Australia: Erlbaum.
- Parmaxi, A., Zaphiris, P., Papadima-Sophocleous, S., & Ioannou, A. (2013). Mapping the landscape of Computer-Assisted Language Learning: An inventory of research. *Interactive Technology and Smart Education*, 10(4), 252-269.

-
- Pawlak, M., Kruk, M. (2012). The development of learner autonomy through Internet resources and its impact on English language attainment. *Studia Anglica Posnaniensia*, 47(2-3), 69-91.
- Pawan, F. (2008). Content-area teachers and scaffolded instruction for English language learners. *Teaching and Teacher Education*, 24, 1450–1462.
- Pennycook, A. (2014). *The cultural politics of English as an international language*. New York, NY: Routledge.
- Perez, M. M., Peters, E., & Desmet, P. (2014). Is less more? Effectiveness and perceived usefulness of keyword and full captioned video for L2 listening comprehension. *ReCALL*, 26(1), 21-43.
- Peterson, M. (1997). Language teaching and networking. *System*, 25(1), 29-37.
- Peterson, M. (2011). Towards a research agenda for the use of three-dimensional virtual worlds in language learning. *Calico Journal*, 29(1), 67-80.
- Picciano, A. G., & Seaman, J. (2009). *K-12 Online Learning: A 2008 Follow-Up of the Survey of US School District Administrators*. Sloan Consortium. Newburyport, MA.
- Pham, H. L. (2012). Differentiated instruction and the need to integrate teaching and practice. *Journal of College Teaching & Learning (Online)*, 9(1), 13.
- Pillemer, D. B. (1991). One- versus two-tailed hypothesis tests in contemporary educational research. *Educational Researcher*, 20(9), 13-17.
- Pishghadam, R., & Ghadiri, S. (2011). Symmetrical or asymmetrical scaffolding: Piagetian vs. Vygotskian views to reading comprehension *Journal of Language and Literacy Education*, 7(1), 49-64.
- Poehner, M. E. (2012). The Zone of Proximal Development and the genesis of self-assessment. *The Modern Language Journal*, 96(4), 610-622.
- Pritchard, A., & Woolward, J. (2010). *Psychology for the classroom: Constructivism and social learning*. New York, NY: Routledge.
- Pu, M. (2009). *An investigation of the relationship between college Chinese EFL students' autonomous learning capacity and motivation in using Computer-Assisted Language Learning* (Doctoral dissertation). Available from ProQuest Dissertations Publishing. (UMI No. 366632)
- Ramnarain, U. (2012). Exploring the use of a cartoon as a learner scaffold in the planning of scientific investigations. *Perspectives in Education*, 30(2), 50-61. 3.

-
- Rao, Z. (1996). Reconciling communicative approaches to the teaching of English with traditional Chinese methods. *Research in the Teaching of English*, 458-471.
- Rao, Z., & Yuan, H. (2016). Employing native-English-speaking teachers in China: Benefits, problems and solutions: Providing native-English-speaking teachers with a local pre-service training program and adopting a team teaching approach are essential for enhancing their efficiency in the Chinese EFL context. *English Today*, 32(4), 12-18.
- Razak, N. A., Saeed, M., & Ahmad, Z. (2013). Adopting Social Networking Sites (SNSs) as interactive communities among English as a foreign language (EFL) learners in writing: Opportunities and challenges. *English Language Teaching*, 6(11), 187-198.
- Redmann, J. (2005). An interactive reading journal for all levels of the foreign language curriculum. *Foreign Language Annals*, 38(4), 484-493.
- Renandya, W. A., & Hu, G. (2018). Introduction to Teaching Listening. *The TESOL Encyclopedia of English Language Teaching*, 1-2.
- Renandya, W. A., & Hu, G. (2018). L2 Listening in China: An Examination of Current Practice. In *International Perspectives on Teaching the Four Skills in ELT* (pp. 37-50). Palgrave Macmillan, Cham.
- Respati, P. (2013). *University Students' Autonomy In Improving Their English Outside Efl Classroom* (Doctoral dissertation). Retrieved from http://repository.uksw.edu/bitstream/123456789/3392/2/T1_112007018_Full%20text.pdf.
- Richards, C. (2005). The design of effective ICT-supported learning activities: Exemplary models, changing requirements, and new possibilities. *Language, Learning and Technology*, 9(1), 60-79.
- Robson, C. (2011). *Real world research*. Hoboken, NJ: Wiley.
- Rogers, E. M. (1995). Diffusion of innovations: Modifications of a model for telecommunications. *Die Diffusion von Innovationen in der Telekommunikation*, 17, 25-38.
- Rose, C. A. (2014). *ESL student perceptions of the value of Facebook in the IEP classroom* (Master's thesis). Retrieved from <http://conservancy.umn.edu/handle/11299/164655>.
- Rubio, F. & Thoms, J. J. (Eds.). (2014). *Hybrid language teaching and learning: exploring theoretical, pedagogical and curricular issues*. Boston: Heinle Cengage Learning.
- Ryan, B. J. (2013). Flipping over: Student – centred learning and assessment. *Journal of Perspectives in Applied Academic Practice*, 1(2), 30-39.

-
- Sakai, S., Takagi, A., & Chu, M. P. (2010). Promoting learner autonomy: Student perceptions of responsibilities in a language classroom in East Asia. *Educational Perspectives*, 43(1), 16-27.
- Salca, V., Moldovan, R., Orza, B., & Vlaicu, A. (2013). Interactive tools for learning foreign languages – Case study: Cluj-Napoca German cultural centre. *Acta Technica Napocensis*, 54(2), 1-6.
- Santos, I. M., & Ali, N. (2011). Exploring the uses of mobile phones to support informal learning. *Education and Information Technologies*, 17(2), 187-203.
- Saran, M., Seferoğlu, G., & Çağıltay, K. (2009). Mobile assisted language learning: English pronunciation at learners' fingertips. *Eurasian Journal of Educational Research (EJER)*, 34(34), 97-114.
- Sardareh, S. A., & Saad, M. R. M. (2013). Malaysian primary school ESL teachers' questions during assessment for learning. *English Language Teaching*, 6(8), 1-9.
- Schwiehorst, K. (2003). Learner autonomy and tandem learning: Putting principles into practice in synchronous and asynchronous telecommunications environments. *Computer Assisted Language Learning*, 16(5), 427-443.
- Sert, N. (2006). EFL student teachers' learning autonomy. *The Asian EFL Journal*, 8(2), 180-201.
- Shahlou, P., & Izadpanah, S. (2016). The study of relationship between EFL teacher's teaching context and their attitudes towards computer assisted language learning. *The Social Sciences*, 11(29), 7018-7024.
- Shen, H., Yuan, Y., & Ewing, R. (2014). English learning websites and digital resources from the perspective of Chinese university EFL practitioners. *ReCALL*, 27(02), 156-176.
- Sherman, J. (2003). *Using authentic video in the language classroom*. Cambridge, England: Cambridge University Press.
- Shi, J. (2010). 网络环境下理工科学生自主学习能力的培养——一项基于元认知策略训练的实证研究. *Foreign Languages in China*. 7(2), 65-69.
- Shin, H. J., & Son, J. B. (2007). EFL teachers' perceptions and perspectives on Internet-assisted language teaching. *Computer-Assisted Language Learning Electronic Journal (CALL-EJ)*, 8(2).
- Simard, D. (2004). Using diaries to promote metalinguistic reflection among elementary school students. *Language Awareness*, 13, 34-48.

-
- Sirisatit, R. (2010). *An activity theory perspective on task – based instruction in a university business EFL class in Thailand: A sociocultural case study* (Doctoral dissertation). Retrieved from http://d-scholarship.pitt.edu/10380/1/SirisatitR12_2010.pdf.
- Si, Y. (2008). 基于计算机的大规模商务英语口语诊断测试实践研究. *Media in Foreign Language Instruction*, 119, 67-71.
- Siyahhan, S., Barab, S. A., & Downton, M. P. (2010). Using activity theory to understand intergenerational play: The case of Family Quest. *International Journal of Computer-Supported Collaborative Learning*, 5(4), 415-432.
- Smagorinsky, P. (1995). The social construction of data: Methodological problems of investigating learning in the Zone of Proximal Development. *Review of Educational Research*, 65(3), 191-212.
- Smith, K., & Craig, H. (2013). Enhancing the autonomous use of CALL: A new curriculum model in EFL. *CALICO Journal*, 30(2), 252-278.
- Sockett, G., & Toffoli, D. (2012). Beyond learner autonomy: A dynamic systems view of the informal learning of English in virtual online communities. *Recall*, 24(2), 138-151.
- Soleimani, M., Sarkhosh, M., & Gahhari, S. (2012). Computer assisted language testing: On the Efficacy of Web-based approach in the instruction of elementary learners of English. *English Language Teaching*, 5(9), 66-70.
- Soloway, E., Norris, C., Blumenfeld, P., Fishman, B. J. K., & Marx, R. (2001). Devices are ready-at-hand. *Communications of the ACM*, 44(6), 15-20.
- Soltanpour, F., & Valizadeh, M. (2017). The effect of the collaboration of reflective notes with CALL on learners' writing accuracy. *European Journal of English Language Teaching*, 2(2), 22-52.
- Son, J. B. (2018). Technology in English as a foreign language (EFL) teaching. *The TESOL Encyclopedia of English Language Teaching*, 1-7.
- Spurrier, J. D. (2003). On the null distribution of the Kruskal–Wallis statistic. *Journal of Nonparametric Statistics*, 15(6), 685-691.
- Stapleton, P. (2002). Critiquing voice as a viable pedagogical tool in L2 writing: Returning spotlight to ideas. *Journal of Second Language Writing*, 11(3), 177–190.
- Stemler, S. (2001). An overview of content analysis. *Practical Assessment, Research & Evaluation*, 7(17), 137-146.

-
- Stewart, M. A., & Pertusa, I. (2004). Gains to language learners from viewing target language closed-captioned films. *Foreign Language Annals*, 37(3), 438-442.
- Stockwell, G., & Harrington, M. (2003). The incidental development of L2 proficiency in NS-NNS email interactions. *CALICO Journal*, 20(2), 337-359.
- Stone, C. A. (1993). What is missing in the metaphor of scaffolding? In E. A. Forman, N. Minick, & C. A. Stone (Eds.), *Contexts for Learning: Sociocultural Dynamics in Children's Development* (pp. 169–183). New York, NY: Oxford University Press.
- Storch, N. (2002). Patterns of interaction in ESL pair work. *Language Learning*, 52(1), 119-158.
- Storch, N. (2007). Investigating the merits of pair work on a text editing task in EFL classes. *Language Teaching*, 11, 143-159.
- Strayer, J. F. (2007). *The effects of the classroom flip on the learning environment: A comparison of learning activity in a traditional classroom and a flip classroom that used an intelligent tutoring system* (Doctoral dissertation). Retrieved from https://etd.ohiolink.edu/!etd.send_file?accession=osu1189523914&disposition=inline.
- Su, Y., Li, Y., Hu, H., & Rosé, C. P. (2018). Exploring college English language learners' self and social regulation of learning during wiki-supported collaborative reading activities. *International Journal of Computer-Supported Collaborative Learning*, 13(1), 35-60.
- Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In I. S. Gass & C. Madden (Eds.), *Input in Second Language Acquisition* (pp. 235-253). Rowley, MA: Newbury House.
- Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *The Modern Language Journal*, 82(3), 320-337.
- Talebinejad, M. R., & Akhgar, F. (2015). The impact of teacher scaffolding on Iranian intermediate EFL learner's listening comprehension achievement. *Theory and Practice in Language Studies*, 5(5), 1101-1105.
- Tang, L. (2009). 对英语学习者文化霸权话语解读的批评话语分析. *Journal of PLA University of Foreign Languages*. 32(4), 49–53.
- Tasker, I. M. (2012). *The dynamics of Chinese learning journeys: A longitudinal study of adult learners of Mandarin in Australia* (Doctoral dissertation). Retrieved from <https://e-publications.une.edu.au/1959.11/11396>.

-
- Teng, Y. (2017). EFL Teachers' Knowledge of Technology in China: Issues and Challenges. In Lin, C. H., Zhang, D., & Zheng, B. (Eds.), *Preparing Foreign Language Teachers for Next-Generation Education* (pp. 23-37). IGI Global.
- Thomas, M. (2012). Contextualizing digital game-based language learning: Transformational paradigm shift or business as usual? In H. Reinders (Ed.), *Digital games in language learning and teaching* (pp. 11-31). Basingstoke, UK: Palgrave Macmillan.
- Thomas, M., Reinders, H., & Warschauer, M. (2012). *Contemporary Computer-Assisted Language Learning*. London, England: Bloomsbury Academic.
- Tian, X., & Suppasetsee, S. (2013). Development of an instructional model for online task-based interactive listening for EFL learners. *English Language Teaching*, 6(3), 30-41.
- Tomlinson, C. (2001). *How to differentiate instruction in mixed-ability classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tran, T. Q., & Duong, T. M. (2018). EFL learners' perceptions of factors influencing learner autonomy development. *Kasetsart Journal of Social Sciences*, xxx, 1-6.
- Tse-Kian, N., & Neo, M. (2004). Classroom innovation: Engaging students in interactive multimedia learning. *Campus - Wide Information Systems*, 21(3), 118-124.
- Tseng, M. C. (2010). Factors that influence online reading: An investigation into EFL students' perceptions. *Reading*, 10(1), 96-105.
- Türel, Y. K., & Johnson, T. E. (2012). Teachers' belief and use of interactive whiteboards for teaching and learning. *Journal of Educational Technology & Society*, 15(1), 381-394.
- Twigg, C. A. (2003). Models for online learning. *Educause review*, 38, 28-38.
- Uehara, S., & Noriega, E. J. M. (2016). Trends in EFL technology and educational coding: A case study of an evaluation application developed on LiveCode. *JALT CALL Journal*, 12(1), 57-78.
- Üstünlüoğlu, E. (2009). Autonomy in language learning: Do students take responsibility for their learning? *Journal of Theory and practice in Education*, 5(2), 148-169.
- van de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacher – student interaction: A decade of research. *Educational Psychology Review*, 22(3), 271-296.
- van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. New York, NY: Longman.

-
- Van Lier, L. (2006). *The ecology and semiotics of language learning: A sociocultural perspective (Vol. 3)*. Springer Science & Business Media.
- Vanijdee, A. (2003). Thai distance English learners and learner autonomy. *Open Learning: The Journal of Open and Distance Learning*, 18(1), 75-84.
- Venere, S., & Watson, J. R. (2017). Collaborative learning through social media for study-abroad and at-home Spanish language learners. *NECTFL Review*, 79.
- Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, 23(3), 34-41.
- Vygotsky, L. (1986). *Thought and language*. Cambridge, MA: MIT Press.
- Watkins, J., & Wilkins, M. (2011). Using YouTube in the EFL classroom. *Language Education in Asia*, 2(1), 113-119.
- Wang, P. (2018). *An evaluative study of the effectiveness of content-based instruction as an EFL approach in China's tertiary education* (Doctoral dissertation). Retrieved from <http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.740738>.
- Wang, Y. (2012). Learning L2 vocabulary with American TV drama from the learner's perspective. *English Language Teaching*, 5(8), 217-225.
- Wang, Y. (2004). Distance language learning: Interactivity and fourth generation Internet-based videoconferencing. *CALICO Journal*, 21(2), 373-395.
- Wang, C. X., Song, H., Xia, F., & Yan, Q. (2009). Integrating Second Life into an EFL program: Students' perspectives. *Journal of Educational Technology Development and Exchange (JETDE)*, 2(1), 1.
- Wang, J., Yu, W. W., & Wu, E. (2013). Empowering mobile assisted social E-learning: Students' expectations and perceptions. *World Journal of Education*, 3(2), 59-70.
- Wang, W., & Gao, X. (2008). English language education in China: A review of selected research. *Journal of Multilingual and Multicultural Development*, 29(5), 380-399.
- Warden, C. (1995). Coping with 500 EFL writing students in Taiwan. *TESOL Matters*, 5(2), 11.
- Warschauer, M. (2000). On-line learning in second language classrooms: An ethnographic study. *Network-based Language Teaching: Concepts and Practice*, 41-58.

-
- Warschauer, M., & Healey, D. (2009). Computers and language learning: An overview. *Language Teaching*, 31(02), 57.
- Warschauer, M., & Kern, R. (2000). *Network-based language teaching: Concepts and practice*. Cambridge, England: Cambridge University Press.
- Watson, J. R. (2007). *Applying sociocultural theory to a language classroom environment with second-year students of college Russian* (Doctoral dissertation). Retrieved from <https://search.proquest.com/openview/dbd0a034d9e5f20cffd1689c79dd4837/1?pq-origsite=gscholar&cbl=18750&diss=y>.
- Weber, R. P. (1990). *Basic content analysis*. Thousand Oaks, CA: SAGE Publications.
- Wei, L. (2013). An experimental study of interactive and cooperative English writing strategy under network environment. *Theory and Practice in Language Studies*, 3(2), 338-344.
- Wei, W., & Motteram, G. (2006). CALL in China. *IATEFL VOICES*(190), 7-8.
- Wen, W. F., & Gao, X. S. (2008). English language education in China: A review of selected research. *Journal of Multilingual and Multicultural Development*, 29, 380-399.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge, England: Cambridge University Press.
- Whyte, S., & Alexander, J. (2014). Implementing tasks with interactive technologies in classroom Computer Assisted Language Learning (CALL): Towards a developmental framework. *Canadian Journal of Learning and Technology*, 40(1), 1-26.
- Williams, C., & Pilonieta, P. (2012). Using interactive writing instruction with kindergarten and first-grade English language learners. *Early Childhood Education Journal*, 40(3), 145-150.
- Winnips, K., & McLoughlan, C. (2001). *Six WWW based learner supports you can build*. Paper presented at the EdMedia, Tampere, Finland. Retrieved from <http://files.eric.ed.gov/fulltext/ED466231.pdf>.
- Wu, W. C. V., Hsieh, J. S. C., & Yang, J. C. (2017). Creating an online learning community in a flipped classroom to enhance EFL learners' oral proficiency. *Journal of Educational Technology & Society*, 20(2), 142-157.
- Wu, S. L., & Ortega, L. (2013). Measuring global oral proficiency in SLA research: A new elicited imitation test of L2 Chinese. *Foreign Language Annals*, 46(4), 680-704.

-
- Wu, W. C. V., Yen, L. L., & Marek, M. (2011). Using online EFL interaction to increase confidence, motivation, and ability. *Journal of Educational Technology & Society, 14*(3), 118-129.
- Xu, H. (2012). Imagined community falling apart: A case study on the transformation of professional identities of novice ESOL teachers in China. *Tesol Quarterly, 46*(3), 568-578.
- Xu, Y., & Liu, Y. (2009). Teacher assessment knowledge and practice: A narrative inquiry of a Chinese college EFL teacher's experience. *Tesol Quarterly, 43*(3), 492-513.
- Xu, H. L., & Moloney, R. (2011). "It makes the whole learning experience better": Student feedback on the use of the interactive whiteboard in learning Chinese at tertiary level. *Asian Social Science, 7*(11), 20-34.
- Yaghoubinejad, H., Zarrinabadi, N., & Nejadansari, D. (2017). Culture-specificity of teacher demotivation: Iranian junior high school teachers caught in the newly-introduced CLT trap!. *Teachers and Teaching, 23*(2), 127-140.
- Yan, C. (2012). 'We can only change in a small way': A study of secondary English teachers' implementation of curriculum reform in China. *Journal of Educational Change, 13*(4), 431-447.
- Yan, Y. (2010). Towards an eclectic framework for teaching EFL writing in a Chinese context. *Online Submission, 7*(3), 29-33.
- Yang, Y. F. (2016). Self-directed learning to develop autonomy in an online ESP community. *Interactive Learning Environments, 24*(7), 1629-1646.
- Yi, H., & Majima, J. (1993). The teacher - learner relationship and classroom interaction in distance learning: A case study of the Japanese language classes at an American high school. *Foreign Language Annals, 26*(1), 21-30.
- Yıldırım, Ö. (2008). Turkish EFL learners' readiness for learner autonomy. *Journal of Language and Linguistic Studies, 4*(1), 65-80.
- Yin, R. K. (2013). *Case study research: Design and methods*. Thousand Oaks, CA: SAGE Publications.
- You, X. (2004). "The choice made from no choice": English writing instruction in a Chinese University. *Journal of Second Language Writing, 13*(2), 97-110.
- Young, D. J. (1991). Creating a Low - Anxiety Classroom Environment: What Does Language Anxiety Research Suggest?. *The modern language journal, 75*(4), 426-437.

-
- Yu, S. (2014). *Understanding Chinese EFL students' participation in group peer feedback of L2 writing: A sociocultural and activity theory perspective* (Doctoral dissertation). Available from the ProQuest Dissertations & Theses (PQDT) Global database. (UMI No. 3690902).
- Yu, Y., & Wang, B. (2009). A study of language learning strategy use in the context of EFL curriculum and pedagogy reform in China. *Asia Pacific Journal of Education*, 29(4), 457-468.
- Yuan, Y. (2014). *Pragmatics, perceptions and strategies in Chinese college English learning*. Shanghai, China: Fudan University Press.
- Yuan, Y., & Shen, H. (2013). Analysis and evaluation of Chinese English learning websites. *Foreign Language Education in China*, 6(1), 41-49.
- Yuan, Y., & Shen, H. (2014). Computer assisted instruction and digital learning resources through the lens of Chinese university English learners. *British Journal of Education, Society & Behavioural Science*, 4(6), 844-856.
- Yuksel, D., & Tanriverdi, B. (2009). Effects of watching captioned movie clip on vocabulary development of EFL learner. *The Turkish Online Journal of Educational Technology*, 8(2), 48-54.
- Zahn, C., Krauskopf, K., Hesse, F. W., & Pea, R. (2012). How to improve collaborative learning with video tools in the classroom? Social vs. cognitive guidance for student teams. *International Journal of Computer-Supported Collaborative Learning*, 7(2), 259-284.
- Zevenbergen, R. (2007). Digital natives come to preschool: Implications for early childhood practice. *Contemporary Issues in Early Childhood*, 8(1), 19.
- Zhalehgooyan, B., & Alavi, S. M. (2014). Contribution of learner autonomy to listening comprehension problems of EFL learners. *Frontiers of Language and Teaching*, 5(1), 86-98.
- Zhang, F. (2012). *Computer-enhanced and mobile-assisted language learning: Emerging issues and trends*. Hershey, PA: IGI Global.
- Zhang, S. (2009). The role of input, interaction and output in the development of oral fluency. *English Language Teaching*, 2(4), 91.
- Zhang, X. (2009). 互动性原则与网络远程英语教学模式探究. *Media in Foreign Language Instruction*, 130, 61-65.
- Zhang, D., Zhao, J. L., Zhou, L., & Nunamaker Jr, J. F. (2004). Can e-learning replace classroom learning?. *Communications of the ACM*, 47(5), 75-79.

Zhou, M. (2016). The roles of social anxiety, autonomy, and learning orientation in second language learning: A structural equation modeling analysis. *System*, 63, 89-100.

Zhu, H. (2003). Globalization and new ELT challenges in China. *English Today*, 19(4), 36-4.

Appendix I: Questionnaire

Dear participants,

As part of the research project, we would like you to help us complete this questionnaire about your English learning and your perceptions of innovative online English learning. Your participation will help promote the improvement of learning and teaching of English in Chinese universities. At the meanwhile, your precious answers will also help us better understand technology-supported English learning and teaching, which will lead to the success of development of innovative learning and teaching tools in this area.

You will spend estimated fifteen to twenty-five minutes on this questionnaire. It consists of forty-three questions in seven pages. The questionnaire is not a test, so there are not right or wrong answers. You just need to answer the questions on the base of your English learning experience and your thinking. You do not need to write your name on it and your identifiable information will be protected securely.

By returning and submitting the questionnaire, you indicate you agree to participate in this study and you allow the researchers to use the provided information.

Thank you for your cooperation. We do appreciate your participation.

Part 1: Demographic information

1. Age: 18 – 19; 20 – 21; 21 – 22; above 23.

2. Gender: Male; Female.

3. How many years have you learned English? _____ years.

Do you have any overseas living/learning experience? Yes; No.

If “Yes”, please specify which country: _____, and for how long: _____.

4. Current English level:

National College Entrance Examination, score: _____;

College English Test Band-4, total score: _____;

College English Test Band-6, total score: _____;

IELTS, total score: _____;

TOEFL, total score: _____;

Other, please specify: _____.

Part 2: Learning motivation and goals

Directions: Read each of the following sentences and indicate what extent you agree or disagree with them. Please tick the one that most applies.

1= Strongly disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly agree

Your thinking	1	2	3	4	5
5. I learn English to meet the curriculum requirements.					
6. I learn English to help me get a good job after graduation.					
7. I learn English because I intend to study overseas in the future.					
8. I would like to spend extra time studying English after class.					
9. I will continue to learn English after graduation.					
10. I select appropriate English learning materials on my own situations					
11. I set my own English learning goals.					
12. I plan my own English learning.					
13. I am able to adjust my plan when necessary.					

Part 3: Learning experience

14. Please rank the frequencies of tasks used in your College English classes below in order from 4 (=most often) to 1 (=the least often), or write NO (=none at all).

Team-work: _____

Group discussion: _____

Presentation: _____

Role play: _____

Others, please specify: _____

Directions: Read following questions or statements and choose the one answer that mostly applies.

15. When you are in an English class, you _____.

- a) volunteer to answer all questions
- b) answer the easy questions
- c) only answer questions when asked
- d) do not answer any questions

16. When the teacher asks you to have a group discussion in an English class, you _____.

- a) actively engage in discussion most of the time
- b) join in the discussion only when you have something you feel meaningful to share

c) listen to others' opinions for most of the time

d) do not involve in any group discussion

17. What do you do when you have some difficulties in your English learning?

a) Wait for teacher's help.

b) Seek help from reference materials.

c) Discuss with peer learners or friends.

d) Do nothing.

Directions: Read and answer the following question.

18. Are you satisfied with the current College English learning/teaching? Why/Why not?

Part 4: Attitudes towards online English learning

Directions: Read each of the following sentences and indicate what extent you agree or disagree with them. Please tick the one that most applies.

1= Strongly disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly agree

Your thinking	1	2	3	4	5
19. I can learn English autonomously via the Internet.					
20. Teachers can be replaced by modern technologies and digital tools in English learning.					
21. I like learning English together with my friends/classmates.					
22. Online learning encourages me to change the way I study English.					
23. I employ online learning resources to prepare for language tests.					
24. It is a trend to use the Internet in English learning.					
25. English learning becomes interesting and attractive by using computers and the Internet.					
26. Computers and the Internet make the interaction easier between peer learners when learning English.					
27. I can improve my listening skill through multimedia and online EFL learning.					
28. I can improve my speaking skill through multimedia and online EFL learning.					
29. I can improve my reading skill through multimedia and online EFL learning.					
30. I can improve my writing skill through multimedia and online EFL learning.					
31. I would like to employ audio materials when I learn English online.					

32. I would like to employ video materials when I learn English online.					
33. I would like to employ games when I learn English online.					
34. I would like to employ text materials when I learn English online.					
35. Multimedia can effectively improve my language abilities and knowledge					
35. I prefer multimedia resources for EFL language learning.					

Directions: Read and answer the following question.

36. What are benefits do you think for online English learning?

Part 5: Influential factors

Directions: Following questions are about influential factors that might **prevent** you from using computers/the Internet to learn English. Read each of the following sentences and indicate what extent you agree or disagree with them. Please tick the one that most applies.

1= Strongly disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly agree

Your thinking	1	2	3	4	5
37. I do not think that computers/the Internet can make innovations to English learning.					
38. There are not enough online learning resources to support my English study.					
39. I do not spend extra time studying English after class.					
40. Online English learning does not contribute to good scores in examinations.					
41. I do not want to learn English online as it is a different learning approach from my peer classmates.					
42. The Internet will distract learners from English learning.					

In the follow-up stage of the study, you will be invited to utilize a video-based online English learning platform to acquire English language knowledge and develop their language competence. This study will employ three modules of an online video-based interactive English learning platform developed by an Australian Research Council (ARC) Linkage research project: *Images, perceptions and resources: Enhancing Australia's role in China's English language education (2011-2014)*. The topics for three modules are: *Waltzing Matilda*, *Australian inventions* and *Welcome to the University of Sydney*. Each module includes a complete set of videos, audio materials, scripts, cultural notes and learning tasks. The researcher will provide instructions, guides and help for all participants in the learning process. It is estimated that students may spend two to three hours to complete one module. They are allowed to three weeks' time to access the online learning platform to complete all three modules.

Would you like to proceed to the next stage of this study?

YES

NO

If you answered **YES**, please indicate your contact details:

Phone: _____

Email: _____

Thank you for your participation.

Appendix II: Guiding questions for individual interviews

English version

1. What is your English learning goal?
2. What do you think of College English course in your university (teaching methods, learning environment, learning materials, etc.)?
3. How do you interact with peers in learning English (e.g. using computers, mobiles, emails, etc.)? What do you think of the peer interaction in the learning process?
4. Have you ever used digital resources to improve your English learning? How do you use these digital resources in learning?
5. What are advantages/disadvantages of employing digital materials in English learning?
6. How do you learn English after class? Do you think the learning platform can facilitate English learning in the extracurricular context?
7. What do you think of the audio-visual materials (e.g., videos, tasks, notes, etc.) applied in the learning platform?
8. Will you continue to learn English via the Internet in the future? Why/Why not?
9. What difficulties do you have when learning English online? What do you do to solve them?

Chinese version

1. 你在英语学习方面有什么目标?
2. 你对于《大学英语》这门课程有什么看法 (教学方式、学习环境、教材等方面)
3. 在日常的英语学习中,你是如何与同学进行互动的 (利用电脑,手机,电子邮件等)?
你对学习过程中的这类互动有什么看法吗?
4. 你是否曾经使用过数字资源来帮助你学习英语? 你是如何利用这类资源的?
5. 你认为利用数字资源辅助英语学习有什么优点/缺点吗?
6. 在课后你是如何学习英语的? 你认为一个在线学习平台可以帮助课外英语学习么?
7. 对于本在线学习平台中的影音学习材料 (例如学习视频,学习任务,注释,答案等),
你有什么看法?
8. 在将来你会继续通过互联网学习英语吗? 为什么?
9. 你在在线英语学习的过程中遇到过什么困难吗? 如果有, 你是如何解决这些困难的?

Appendix III: Guiding questions for focus groups

English version

1. Why do you learn English?
2. How did you learn English before you entered the university? How about now? Any differences?
3. What did you expect to learn prior to the commencement of your learning online? What do you think of online English learning experience now?
4. What did you do when learning English via the platform? Please provide some details (when, where, what learning materials, etc.).
5. How did you achieve your learning goals by using the learning platform?
6. How did you evaluate your performance of the online learning?
7. Which learning module do you like most/least? Why? Why not?
8. Did you encounter any problems/difficulties when learning on the platform? How did you sort them out?
9. Did you get any guidance or instructions from various means in the online learning process? If yes, what guidance or instructions were given to you via what means?
10. How did you develop your online self-study to satisfy your learning goals?
11. What do you think of the online interactions with peers and teachers?

Chinese version

1. 你们为什么学习英语？
2. 你们在进入大学之前是如何学习英语的？现在是如何学习英语的？两者之间有什么不同吗？
3. 在参与之前，你们曾期望从在线英语学习中有什么收获？你们现在又如何评价你们的在线英语学习经历？
4. 你们在在线平台上是如何学习英语的？请提供一些细节以供参考（例如学习时间、学习地点、所使用的材料等等）。
5. 你们是如何使用在线英语学习平台达成你们各自的学习目的的？
6. 你们会如何评价你们在在线英语学习平台学习过程中的表现？
7. 在3个学习模块中，你们最喜欢/最不喜欢的是哪个？为什么喜欢/不喜欢？
8. 在学习过程中，你们是否遇到了一些困难？你们是如何解决这些困难的？
9. 在在线学习的过程中，你们是否从各种途径得到过指导和帮助？如果有，你们从什么样的途径得到过什么样的指导或帮助？
10. 在在线学习的过程中，你们是如何通过自学来达成你们各自的学习目标的？
11. 你们对于学习过程中与老师及同学的在线互动有什么看法？

Appendix IV: A sample extract of individual interview transcripts

Interview transcript:

Kent (pseudonym), Individual face-to-face interview Session 1, 18 May 2016

Original version

Chen: 你认为利用数字资源、通过互联网来进行英语学习有什么优点吗?

Kent: 在线英语学习对所有学生都是公平的。那些比较好的学习资源就放在网上, 对所有学生都是公开的。这是一个公平问题。传统的方法受制与教师的原因, 东西部的英语教学水平其实是不均衡的。但是在线学习解决了这个问题。它让有质量的英语学习不再是那些恰好生活在经济发达地区的学生的一种“特权”。所有学生都能够比较容易从这个途径获得自己需要的资源。

Chen: 所以你认为在线英语学习增进了社会公平, 对吗?

Kent: 至少它增进了教育公平。

.....

Chen: 你在在线英语学习的过程中遇到过什么困难吗?

Kent: 和同学的互动有时会让我觉得挺焦虑的。

Chen: 之前有学生提过说, 相比较于在教室内通过一种面对面的方式互动, 在网上进行互动会感觉到轻松许多。你同意这个观点吗?

Kent: 肯定的。网上互动确实要少很多顾虑, 特别是当我匿名的时候。

Chen: 但是你还是会有有一定的焦虑?

Kent: 对。

Chen: 为什么呢?

Kent: 有时候我会觉得我自己的语言水平不够好, 难以让我参与到和其他同学的互动中去。我看到他们彼此之间的交流都很顺利很成功。但是我担心如果我加入进去的话, 可能大家都不会太开心。

Chen: 即使是在网络上他们都不知道你是谁的情况下?

Kent: 网络是从一定程度上缓解了我的这种焦虑。但是我自己知道我是谁, 我自己会感到不舒服。所以我觉得我最好还是退出, 这样对大家比较好。

.....

Chen: 你在在线学习的过程中, 是如何解决你所遇到的困难的? 请你举个例子说明一下。

Kent: 学习那些视频材料的时候, 我有遇到过一些困难。比如我发现我没办法逐字逐词地听懂视频中的对话。

Chen: 那你是怎么解决这个问题呢?

Kent: 我看了一遍视频发现没办法完全听懂之后, 就直接去查给出的 transcript 了。

Chen: 这种情况出现的次数多吗?

Kent: 我一遇到类似困难就会这样去查。所以还挺多的。而且我有时候会反复查那个 transcript, 因为有可能第二遍还是听不懂, 就需要再看一下。

Chen: 那你觉得这些材料对你的英语学习有帮助吗?

Kent: 肯定是有帮助的。这种材料都很直接, 拿到手就能解决我的问题。但是说实话, 我感觉有时候我太过于依赖这些材料了。这样可能会不利于我的学习。

.....

Translated version

Chen: What are advantages of employing digital materials and the Internet for learning English?

Kent: Online English learning is equal to all students. It makes qualified learning resources online and open to all students. It is about justice. The traditional way for language learning and teaching is unbalanced between the west regions and eastern regions due to teacher's qualification, while online English learning makes difference. It makes learning resources accessible to all students, instead of the "privileges" of those who happen to study in a developed region.

Chen: So you are suggesting online English learning improves social justice, right?

Kent: At least it improves the education equity.

...

Chen: Did you encounter any problems when learning on the Internet?

Kent: Sometimes interaction with peers in English was really frustrating for me.

Chen: Someone mentioned that compared with face-to-face interaction in the classroom, online interaction made students feel more relaxed and comfortable. Do you agree with that?

Kent: Definitely. Online interaction was with much less concerns, particularly when I was anonymous.

Chen: But you were still anxious.

Kent: True.

Chen: Why?

Kent: Sometimes I thought I was incapable to engage in peer interaction by using English. I found their communication was quite successful. I worried that my engagement might make everyone unhappy.

Chen: Even on the Internet without revealing your identity?

Kent: The Internet would ease my anxiety to a certain degree. But I knew who I was. I would be uncomfortable. So I felt better to withdraw from the interaction, which might be good for all participants.

...

Chen: What did you do to solve the learning obstacles you encountered in the online learning? Please provide an example.

Kent: I found that it was difficult for me to follow the videos words by words when learning online.

Chen: Then what did you do?

Kent: When I found I could not completely understand the video, I went to the transcript for help immediately.

Chen: Was that common for you?

Kent: As long as I had similar difficulties. Sometimes I made heavy and repeated uses of the transcript, till I could fully comprehend the videos.

Chen: Do you think these materials were helpful to your English learning?

Kent: Absolutely. These materials were very straightforward, which could directly solve my problems. But to be honest, I relied too much on them, which might be harmful to my language learning.

Appendix V: Discussion topics

Discussion topics for Learning Module 1:

1. What impressed you most in this learning module?
2. Where would you live if you were studying at USYD? Why?
3. What is the difference between being an international student in USYD and being a local one in your university?
4. When choosing a university, what do you care about most?
5. Universities around the world are experiencing frequent infrastructure constructions, what do you think of them?
6. Please briefly introduce your university or any one you are familiar with.
7. Are you a member of any clubs or societies in the university? Please give a brief comment of your experience there.
8. What do you often do after class in the university?

Discussion topics for Learning Module 2:

1. In your opinion, which one of all the mentioned inventions is most important? Why?
2. Please name one or two inventions in modern era that have changed your life.
3. From your perspective, which company in China can be described as “being creative”?
4. Which Chinese invention impresses you most? Why?
5. What device is your favourite for music playing?

-
6. If you had the opportunity to improve or invent a tool to better your life, what would you do?

Discussion topics for Learning Module 3:

1. What kind of music do you like most? Please give an example.
2. What is your favourite English song? Why?
3. Which singer/band do you like most? Why?
4. Do you have any specific taste of music? Could you try to recommend a song or a singer to your peers?
5. There are a number of talent shows on the Internet in China. Have you watched any of these shows? What do you think of the shows and the participants?
6. Could you share a story about a song or a singer?